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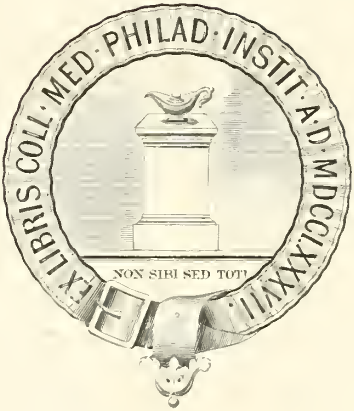
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THE

AMERICAN PRACTITIONER:

A MONTHLY JOURNAL OF

MEDICINE AND SURGERY.

EDITED BY

DAVID W. YANDELL, M.D.,
Professor of Clinical Surgery in the University of Louisville,

AND

THEOPHILUS PARVIN, M.D., LL.D.,
Late Professor of the Medical and Surgical Diseases of Women in the University of Louisville.

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LIST OF CONTRIBUTORS.

WILLIAM BERRY, M. D.
RICHARD C. BRANDEIS, M. D.
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THE AMERICAN PRACTITIONER.

JULY, 1873.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

OBSERVATIONS UPON THE TREATMENT OF YELLOW FEVER.

BY JOSEPH JONES, M. D.

Professor of Chemistry and Clinical Medicine in the Medical Department of the University of Louisiana; Visiting Physician of Charity Hospital, New Orleans, La.

1. Yellow fever is a self-limited disease, and can not be arrested by drugs. The poison of yellow fever, as well as the deleterious products resulting from the chemical changes which it excites, are eliminated mainly by the skin and kidneys. Black vomit is the *result* of the action of the yellow-fever poison upon the blood and upon certain organs. It should neither be regarded as the active cause nor be treated as *the disease.* Black vomit must be viewed as a *result* and not as a *cause* of diseased action. Therefore the functions of the skin and kidneys should be promoted by suitable means during the progress of the disease. During the early stages the physician should employ those measures which are best adapted to equalize the circulation and promote the regular

and free exercise of the functions of the skin and kidneys. Stimulating diuretics should, as a general rule, be avoided, as they tend to increase the irritation and congestion of the kidneys. A favorable impression may be made upon the circulation and upon the skin by the free use of the hot mustard foot-bath, by the vapor-bath, and in certain cases by the warm-water bath. The action of the skin and kidneys may be promoted by draughts of lemonade and of warm decoctions of mild diuretics, as orange-leaf and sage-tea, and water charged with carbonic acid.

2. The diet should be light but nutritious. Beef-tea, chicken-tea, corn and rice-gruel, and barley-water are the best forms of nourishment, and should be continued at regular intervals throughout the active stages of the disease. Solid food, and even bread, should be avoided. In many cases the preceding measures, accompanied by absolute rest in bed and the careful and continuous attention of an experienced nurse, will be all that is required. Alcoholic stimulants should be used with caution, and their effects noted. They have proved beneficial in certain cases attended with great prostration in the stage of febrile excitement. Champagne, when pure, is perhaps one of the best forms of alcoholic stimulants, from the presence of the carbonic acid with which it is charged.

3. Efficient but gentle purgation in the *early part* of the *first stage* of active febrile excitement may prove beneficial in relieving in a measure the congestion of the kidneys and liver, and in removing fecal matters from the bowels. If mercurials are employed, they should be used in the early part of the first stage, not later than the second day of the disease. For an adult from eight to twelve grains of calomel or blue mass will be sufficient. Purgatives should not be administered in the second stage of calm.

4. Quinine may prove beneficial in the *earliest stage* of the disease by its effects upon the nervous system, and by

its power of diminishing the temperature and equalizing the circulation; but this drug has no such curative effect in yellow fever as it has in paroxysmal malarial fever. Yellow fever will run a definite course, and pass through a definite series of changes, whether quinine be administered or withheld. After a careful examination of the statements of Blair and others we have failed to discover any facts or cases by which the power of large doses of quinine to *abort yellow fever* can be fully and unequivocally established. It is very evident, from his own statements, that the action of Blair's favorite compound of calomel and quinine, having the symbol 20×24, was very uncertain; and questions may be raised as to whether the cases said to have been aborted were yellow fever at all, or whether they may not have been some form of malarial paroxysmal fever, or whether they may not have been the milder forms of yellow fever, which would most probably have progressed regularly to convalescence after the hot stage of febrile excitement. Our own experience, as well as that of many others, has not accorded with the statement that after yellow fever has been established it *can be aborted.* Of course it would be entirely unnecessary to argue the question with those whose diagnostic powers are so acute that they are able "to detect a case of yellow fever before the supervention of the hot stage."

The power of quinine not only to arrest but also to ward off paroxysmal malarial fever is undoubted; and it has been used extensively, not only in the treatment of yellow fever, but more recently as a prophylactic. Dr. Newkirk, who was at Asuncion during the recent severe epidemic of yellow fever, assured Dr. Wm. Nathaniel Hiron, of Buenos Ayres, that the mortality was small, and that quinine was very generally and extensively used; and he expressed his belief that quinine was prophylactic, and that its continuous use in a healthy person during an epidemic caused any disease that showed itself to be mild and tractable.

Dr. Hiron, in his account of the recent severe epidemic of yellow fever in which Buenos Ayres, with a population not larger than that of New Orleans, lost, according to the most accurate estimates, nearly twenty thousand of her citizens, records the additional fact, illustrating the prophylactic properties of quinine, that "of eleven *practicantes* (dressers) of the Hospital de Hombres eight took quinine in doses of three grains daily. All of these had fever of a benign form. Three took no quinine; these had the fever very severely, and one died."

While the facts relating to this important subject are too few to warrant any decided conclusion as to the propriety and necessity of using quinine as a prophylactic by those exposed to the yellow-fever atmosphere, at the same time there are facts which indicate that quinine acts not so much as an "antidote" to the poison, but as an "antidote" to the *effects* of the poison, in the system, by preserving the integrity of the blood, regulating and promoting excretion, equalizing the circulation, and fortifying the nervous system against the action of the poison. According to Binz, quinine has the power of arresting putrefaction and fermentation, and is an active poison for all low organisms, animal and vegetable; and Dr. Grace Calvert has confirmed the observations of Binz, and announced the power of quinine to prevent the development of fungi.

These facts have been applied to the explanation of the effects of quinine upon the process of inflammation. Thus, according to Conheim's views, pus being mainly a collection of white blood-globules which have passed through the walls of the vessels—quinine having the power of arresting the motions of the white corpuscles, hence preventing their exit from the vessels—the alkaloid arrests, or at all events diminishes, the formation of pus during the course of inflammation. The well-established effect of quinine in producing a *decrement of temperature in fever* has been referred to its power of destroying the ozonizing power of certain substances; and as the red corpuscles have this power, quinine in the blood is supposed to diminish the oxidation of tissue, and thus to lessen the production of heat. Thus Ranke and Keener found that the tissue changes were diminished under the action of large doses of quinine. Zuntz has recorded the observation that quinine, in ten-grain doses, lessens the daily excretion of urea by one third or more; and Unruh has found the same to occur when quinine is administered in fevers. Harley added quinine to blood, and found that it took up less oxygen and gave off less carbonic acid than blood which had not been thus treated. Zuntz and Schute have employed the changes in the alkalinity of the blood for the determination of the same fact. Thus, if fresh blood be drawn, a development of acid begins in it, and continues, at first rapidly, then more slowly, till putrefaction sets in; and as this acidification depends on oxidation, the diminished alkalinity of the blood thereby produced furnishes a test of the rapidity with which oxidation proceeds; and it has been determined by the experiments of Zuntz, Scharænbroich, and Schute that quinine, bebeerine, cinchonine, and picrate of sodium lessen, in different degrees, the production of acid, and consequently prevent the oxidation of the blood.

The experiments of Binz are especially important in their bearing upon the question of the direct action of quinine upon the chemical changes of the blood, or of its indirect action through the nervous system, which show that when putrefying liquids are injected into the circulation the temperature of the body rises; but if the fluids be previously mixed with quinine, whereby the putrefactive processes are arrested or destroyed, the rise in temperature is either entirely arrested or considerably diminished. Such experiments not only throw light upon the therapeutic action of such alkaloids as quinine, but they also illustrate, as it were, the very nature of the processes of those diseases, the effects of which they modify or counteract, by the peculiar chain of chemical actions which they induce in the blood.

5. While local blood-letting may be beneficial in the first stage, when practiced chiefly for the relief of local congestions of the stomach and kidneys general blood-letting is injurious on account of its depressing effects upon the heart and nervous system. Cut cups should be employed with caution, and in the majority of cases they are unnecessary. The circulation will best be influenced by dry cups, sinapisms, and hot mustard foot-baths. Blood-letting, either in large or small quantities, repeated at intervals, is injurious, because it permanently reduces the pulse, prostrates the powers of life, and quickens the fatal termination.

6. The employment of the mineral acids internally, as the nitro-muriatic, from its supposed beneficial effects upon the jaundice, as well as of the tincture of the sesquichloride of iron, from its supposed power of arresting or preventing black vomit, is of very doubtful propriety. If the view be correct that black vomit is intimately associated with and even dependent upon impairment if not complete suppression of the functions of the kidneys, and if to a certain extent it be an effort of nature to relieve the blood of certain poisonous constituents, such agents can have little or no remedial power, and they are in many cases directly injurious by their irritant action upon the congested, irritated, and softened gastric mucous membrane.

7. While opium and its preparations may, in certain cases attended with sleeplessness and great restlessness in the first stage, produce favorable results, at the same time they possess no power of arresting or curing the disease; and should be used with great caution, as they may act with great energy and even poisonous effects when the function of the kidneys is impaired or arrested. This observation applies equally whether opiates be administered by the mouth or by subcutaneous injection.

8. The maintenance as far as possible of absolute rest in the recumbent posture. This precaution appears to be indicated by the results of experience, as well as by the *lesions of the heart*, which I have shown by careful post-mortem examinations to be characteristic of this disease. The central organ of the circulation is structurally altered and enfeebled in yellow fever. The muscular structures of the heart present alterations similar to those observed in the liver and kidneys. Oil and granular albuminoid or fibroid matter is deposited within and around the muscular fibrillæ, and the organ after death presents a yellow, flabby appearance. In some cases time is required for the restoration of its free and vigorous action, and this result is impossible without absolute and continuous rest in the recumbent posture.

Every case of yellow fever should be regarded as *serious*, however slight the symptoms may appear; and on account of the profound structural alterations of the heart, liver, and kidneys, and the profound alterations of the blood, the closest medical attendance and the most careful nursing is demanded.

9. The maintenance of free ventilation, and at the same time the avoidance by proper coverings of sudden changes of temperature.

I have shown by numerous careful analyses of the urine, and by microscopical examinations of the kidneys after death, that in fatal cases the lesions of these organs are profound. The results of these investigations afford an explanation of the fact that sudden changes or depressions of temperature often cause sudden and fatal changes in cases of yellow fever. By sudden depressions of temperature the function of the skin is diminished or arrested, internal congestions promoted and augmented in the enfeebled state of the circulatory and nervous systems which characterize the second stage of calm and depression, and the already crippled kidneys have an additional amount of work thrown upon them, while at the same time they are still further incapacitated for the performance of this work by the increased congestion.

10. The sudden fatal termination of many cases of yellow fever is to be referred chiefly to the sudden arrest of the function of the kidneys. Complete suppression of urine in yellow fever is of more fatal import even than black vomit, which it often accompanies and precedes. In cases of suppression of urine in yellow fever the malpighian corpuscles and tubuli-urinifiri are filled with granular albuminoid matter, oil-globules, and detached epithelial cells. If the cessation of the excretion of urine was due simply to capillary congestion or defective enervation, it might be met by appropriate remedies; but the results of my chemical and microscopical examinations have placed in a clear light the reason of the impotency of all measures heretofore proposed for the relief of this fatal symptom. The tincture of ergot has been said to have restored the excretion of the urine, but this powerful agent has failed in my hands. The careful physician endeavors to promote the regular action of the kidneys, as indicated in section 1, from the very inception of the disease. As long as the kidneys excrete urine freely we may entertain hopes of recovery, even though black vomit and jaundice may have supervened.

As a general rule, suppression of the urinary excretion is speedily followed by restlessness, delirium, and coma, and in some cases convulsions. It is folly to expect any good results from sedatives and the various preparations of opium in such cases. Counter-irritants to the surface and the prolonged use of the hot and warm baths alone promise any good.

11. Yellow fever is a self-limited disease, occurring, as a general rule, but once in a life-time. The constitution of the blood and even the textures of the body are altered. The most important organs, as the heart, kidneys, and liver, as well as the most important nutritive fluids, are profoundly

impressed. These changes of the blood, heart, kidneys, and liver, and perhaps also of the nervous system, may be compared to the profound changes induced in the blood and organs, and especially in the integument, by the small-pox poison. I have shown by careful analyses that when the kidneys cease acting in yellow fever urea and carbonate of ammonia and bile accumulate in the blood, brain, liver, and heart. Many of the nervous symptoms characteristic of yellow fever are referable to the retention of the bile and the constituents of the urine in the blood.

If this view be correct, we can not by *drugs arrest* or *cure* yellow fever any more than we can arrest or cure by drugs small-pox, measles, or scarlet fever. If drugs accomplish the effect of promoting the free and regular action of those emunctories through which the poison and the products of its action are eliminated, and if, further, they tend to preserve the integrity of the blood, and to sustain the action of the circulatory and nervous systems, they will without doubt achieve much good, and perhaps all that we are justified in looking for in the present state of our knowledge.

By judicious treatment, and by proper attention to ventilation, diet, and rest, we place the patient in that condition best adapted to the successful elimination of the poison and the products of its action; but we do not arrest or cure the disease, as we certainly may do in paroxysmal malarial fevers, by the proper administration of quinine.

493 St. Charles Street, New Orleans.

IODINE LOCALLY IN DISEASES OF WOMEN.

BY J. HALE, M. D.

Although iodine has been recommended for several years as an application in many of the diseases peculiar to women, yet its use is by no means so general as it should be. With few exceptions, writers upon diseases of women have but cursorily adverted to it, and hence young practitioners are liable to conclude that it is a remedy of little value. The writings of Drs. Churchill, Tilt, Sims, Emmet, Thomas, Parvin, and other gynecologists of modern date have, however, given it more prominence in the history of gynecology.

I have been using iodine as a local remedy in various diseases of the female generative organs for the last ten years, and with more satisfactory results than I have had from any other agent. Iodine possesses powerful chemical affinities, and combines rapidly with organic substances. When applied to the skin or mucous membranes it readily penetrates them, and enters the system to some extent, so much so that some women have its peculiar taste in the mouth after its application to the cervix uteri. Its local action is that of an irritant, astringent, alterative, and, when freely applied, vesicant. It is especially in the chronic forms of disease that iodine is applicable as a local remedy. In chronic vaginitis I have found the tincture of iodine a very efficient remedy, not only in the simple form and in granular disease, but also in specific. I apply the iodine to the entire vaginal mucous membrane from the *cervix uteri* to the *ostium vaginæ*, using a tubular speculum introduced up to the cervix uteri; and as it is gradually withdrawn brushing with a camel's-hair pencil saturated with the tincture the vaginal walls. I repeat the application every third day, and during the interim advise injections of warm water used once or twice a day. I have been successful with this treatment in some very obstinate cases of chronic vaginitis, after an ineffectual trial of the various astringent remedies ordinarily used.

In *chronic aplastic* inflammation of the cervix uteri and its concomitants — mucous abrasion, superficial ulceration, aphthous and pustular eruptions, etc.—I have used the tincture of iodine with the best results. I apply it to the cervix with a camel's-hair pencil every three or four days, and have seldom failed to control the inflammation, abrasion, ulceration, etc., in a few weeks, without the use of any other remedy.

In *chronic hyperplastic* inflammation of the cervix uteri much may be accomplished by the use of iodine. In this form of cervical inflammation we have one of the most obstinate and unsatisfactory diseases that we are called to treat. The cervix is greatly enlarged, often to three or four times its normal size, is generally indurated, and often gives rise to many serious complications, as cystitis, rectitis, pelvic cellulitis, displacements, etc. I have used iodine with very satisfactory results in these cases. I use a stronger preparation than the ordinary tincture—generally a preparation containing from thirty to sixty grains of iodine and half that quantity of iodide of potash, to an ounce of alcohol. I apply this to the cervix and cervical canal every third day, until three or four successive applications have been made, and then prolong the interval to six or eight days. As the cervix soon becomes vesicated, the interval must be prolonged or a milder preparation used.

I apply the iodine to the cervix with a camel's-hair pencil, and to the cervical canal with Emmet's applicator, or some similar instrument, bent to the proper curve to readily pass into the canal. I wrap about two inches of the curved extremity of the applicator with cotton-wool, saturate it with the iodine, and pass it into the cervical canal as far as it can readily be done, allow it to remain a few seconds, and remove it. By iodine used in this way I have been successful in relieving several cases of *hyperplastic inflammation* of the cervix uteri of some years' duration.

There are other methods of using iodine in these cases which may be equally efficacious. The iodized cotton introduced by Dr. Greenhalgh is a very good method of securing the continuous action of the remedy. It is prepared by dissolving two ounces of iodide of potash and one ounce of iodine in eight ounces of glycerine, saturating eight ounces of cotton-wool with the solution, and then carefully drying it. A pledget of the iodized cotton (with a string attached to remove it by) is placed in contact with the cervix uteri, and allowed to remain for two or three days.

In chronic endocervicitis and endometritis I have found iodine the safest, least painful, and most efficient local remedy I have ever used. Before applying the iodine the mucus should be removed from the cervical canal, which may readily be done by wrapping the applicator with cotton and passing it into the cervical canal, giving it a few turns and withdrawing it, repeating the operation until the canal is clear of mucus. I then apply the strong preparation before mentioned to the cervical canal in endocervicitis, and in endometritis to the uterine cavity, using the applicator wrapped at its curved extremity, for two or three inches, with cotton-wool, and the cotton then saturated with the iodine solution. I repeat the application every three or four days for several times, and then prolong the interval to seven or eight days.

I have observed a peculiar susceptibility to the action of the iodine in the vagina and cervix uteri in some women; so much so that the preparation above mentioned in such subjects produces considerable pain and irritation, and in rare cases even active inflammation of the mucous membrane of the parts to which it is applied. In such subjects a much weaker preparation should be used. Such cases are, however, an exception to the rule, the iodine generally producing so little pain or irritation that it is unnecessary to confine the patient to bed after its use; but, on the contrary, she can, as a general rule, safely pursue her ordinary avocations. It is seldom necessary to dilate the cervical canal to make these applications, as in endocervicitis and endometritis the cervical canal and internal os are generally sufficiently open.

In chronic corporal metritis iodine may be used with benefit. Applied to the cervix uteri, and to the inguinal regions and inner part of the thighs, I have found it to greatly mitigate the uterine pain and irritation, and, I believe, exert a curative influence over the inflammation. By the use of iodine in this way we obtain not only its local alterative and revulsive action, but in some degree its constitutional effects. In passive metrorrhagia iodine is a very efficient remedy. Applied as recommended in endometritis, it has seldom failed in my hands to control the bleeding in a very short time. In subinvolution of the uterus in feeble subjects iodine applied to the cervix, cervical canal, and uterine cavity is a remedy of great value. I have found it one of the most efficient remedies I have ever used in these troublesome cases.

In the so-called "uterine irritation"—properly neuralgia or hyperæsthesia of the genitals—iodine may be used with benefit as a counter-irritant. I have found it a valuable remedy in such cases when freely applied to the sacrum and inner part of the thighs. In chronic ovaritis iodine applied over the region of the diseased ovary, and to the inner part of the thighs, is a very effective remedy. I have been successful in relieving some very obstinate cases of ovaritis with iodine used in this way.

Iodine may be used with benefit in other affections of the female genitals. I have only mentioned its use in such cases as have come under my own observation, and the mode in which I applied it, which differs but little from that recommended by others in these cases.

Owensboro, Ky.

FRACTURE OF THE SKULL—MENINGITIS—AUTOPSY.

BY JOSEPH N. M'CORMICK, M. D.

Col. H. C. D., aged forty-three years, Kentucky, married, United States revenue officer, was severely wounded in both thighs during the late war. Had been intemperate in his habits for several years; had delirium tremens once or twice; had been drinking very hard for six weeks previous to the 15th of August, 1872, when he received a number of blows on the head from the butt of a small pistol. He was insensible for about one hour. I saw him in two hours. There was considerable prostration from loss of blood, and he was under the influence of liquor. Marked tremulousness existed. Pulse 90, feeble; temperature 98°. There was an irregular wound, one inch and a fourth in length, above and to the outer side of the left eye; another, in upper part of the left temporal region, three fourths of an inch in length, which exposed the bone; another in the upper portion of the forehead, two inches to left of median line, extending obliquely under the skin in the direction of the median line, and exposing the bone the whole length of the wound. An examination revealed a fracture, without depression, extending from the lower angle of the wound backward and to the left side. The hemorrhage from temporal region ceased after cleansing the wound and exposing it to the air. Water-dressings were applied to the wounds, complete rest enjoined, and twenty grains bromide of potassium ordered every three hours.

August 16th—Had slept some; vomited several times during the night; made frequent attempts to get out of bed; complained of some pain in the region of the wound on the forehead; pulse 90; temperature M. 98°, E. 99°; pupils normal. Bowels had not been moved, but a purgative was not given, because, on examination, there seemed a tendency to diarrhea. Continued the bromide.

August 17th—Had some rest; was more rational; nausea and vomiting continued; the bowels had moved several times during the night; wounds were uniting; complained of intense, deep-seated pain in region of wound on the forehead. Pulse 80; temperature M. 98°, E. 98°. Continued the bromide, and directed that bladders of ice be applied to the head.

August 18th—Rested well; had slight headache; rational; bowels rather loose; temperature M. 98°, E. 98°; pulse 80.

August 19th—Did not sleep; had marked hallucinations, and made frequent attempts to get out of bed; pupils moderately and equally dilated; pulse 112; temperature M. 103°, E. 102½°. Continued the ice, and directed thirty grains each of bromide of potash and chloral hydrate every three hours.

August 20th—Did not sleep; delirium and hallucinations continued; was very tremulous; temperature M. 101°, E. 102½°; pulse 100.

August 21st—Had slept several hours; some delirium; pulse 90; temperature M. 100°, E. 101°; bowels continued rather loose; pupils act under influence of changes of light.

August 22d—Slept several hours; was almost perfectly rational; had some appetite; pulse 90; temperature M. 100°, E. 101°. Stopped the chloral. The wounds have all opened up, and some redness and swelling exists around each of them. Complains of constant, deep-seated pain about the wound on the forehead.

August 23d—Was much improved; pulse 80; temperature M. 99°, E. 100°; no tremors.

August 27th—There was no material change from time of last note. Temperature continued to rise in the evening to 100°, and to fall again in the morning to 99°. Pupils were moderately dilated, responding to changes of light. Pulse 80; bowels open; some appetite. Dr. D. W. Yandell saw the case at this time. In consequence of the marked evening exacerbations, gave him five grains of quinine every four hours. Continued the ice and bromide, and gave chloral at night.

August 30th—The delirium had increased; prostration was marked; pulse 86, feeble; temperature M. 98½°, E. 100°. Discontinued the quinine. Ordered milk and chicken-broth to be given freely.

September 4th—Constant low, muttering delirium existed; made many attempts to get out of bed, but was so weak that he could not do so; pulse 70; temperature M. 99°, E. 100½°; pupils dilated, and respond but imperfectly to changes of light; urine was retained for several hours, and was drawn with the catheter. From this time the prostration increased; he sank into complete coma, and died on the 9th, the twenty-fifth day from the receipt of the injuries.

AUTOPSY.

Autopsy made six hours after death. Six feet four inches in height; well developed; moderately nourished. All the wounds on the head had healed, except the one on the forehead. On making ordinary thoracic and abdominal section, found a moderate amount of adipose tissue.

Topography—Lungs meet in median line down to lower border of the third costal cartilage. Uncovered pericardial space three and a half by three inches. Intestines distended with gas; some firm adhesions over posterior portion of left lung; a few bands bind the base of the right lung to the diaphragm.

Left lung—Crepitant throughout; some old depressions over apex, limited in extent, beneath which the lung tissue is firmer; containing some small calcareous deposits; hypostatic congestion well marked posteriorly; sections of entire lung float in water.

Right lung—Posterior portion almost non-crepitant, friable, a dark serum exuding on section; much pigment deposit in interstitial tissue of both lungs; sections of entire lung float in water.

Heart—Four and a half by three inches in measurement; weight nine ounces; valves healthy, except a thickening of the margins of one segment of the mitral; a firm whitish clot in right ventricle, and extending some distance into the pulmonary artery, marked distinctly by the valves; about three drachms of light-colored serum in the cavity of the pericardium.

Liver—Measures eleven by seven by three inches; weight fifty-eight ounces; well-marked nutmeg appearance on section; spleen healthy.

Kidneys—Weight eleven and a half ounces; capsules easily detached; boundaries between cortical and medullary portions well defined; stomach and intestines healthy.

Scalp—Is dark and congested over left side, especially in the region of the wounds. Beneath the wound over the anterior part of the squamous portion of the temporal bone there is a loss of bone substance two by three lines in dimensions and about one line in depth. There is a fracture of the bone beginning at the lower inner angle of the wound on the forehead, and extending backward and to the left side one inch and a fourth, involving only the external table. On opening the cranium a considerable amount of opaque, reddish serum escaped. At a point corresponding to the injury of the frontal bone the dura mater was about double the thickness of that membrane at the corresponding point on the right side, gradually shading off from this central point to the thickness of the surrounding parts of the membrane. The pia mater is thickened, opaque, and the arterial vessels are filled with blood. The opacity and congestion are more defined over the convexity of the brain, and on the left side more than the right. There was a considerable amount of lymph and pus beneath the arachnoid, in the meshes of the pia mater, and especially between the convolutions, giving to the whole surface of the brain a greenish hue. There was a small amount of reddish serum in both lateral ventricles. A microscopical examination of the exudation showed the presence of imperfectly-formed cells in abundance, with some fibrillæ. Brain weighed fifty-eight ounces.

New Haven, Ky.

ON THE USE OF CALABAR BEAN AND ATROPIA IN CERTAIN AFFECTIONS OF THE EYE.*

BY E. B. RICHARDSON, M. D.

I propose making this evening a few brief remarks on the use of calabar bean and atropia in certain affections of the eye.

Without going into a lengthy description of the drug first named, I will only say that I have used two extracts—the solid alcoholic (in consistency and appearance about like the extract of belladonna) and the fluid extract. The general effect of the drug when given in sufficient doses is to lessen the energy of the spinal cord, exerting a similar sedative influence on the sympathetic; but it is its *specific* action—that of contracting the pupil—which renders it peculiarly valuable in certain affections of the eye. This it does by causing spasmodic contraction of the ciliary muscle and sphincter pupilæ, at the same time paralyzing the radiating fibers of the iris. This apparent inconsistency in the action of the drug (stimulating one muscle and paralyzing another in the same organ) is explained upon the hypothesis that both the ciliary muscle and sphincter pupilæ are under control of cerebral influences, while the radiating fibers are under control of the sympathetic; and the bean affecting only the nerves derived from the spinal and sympathetic, the radiating fibers of the iris alone are paralyzed, leaving the stimulating force from the nervous centers still exerted to contract the ciliary and sphincter muscles. In mydriasis, or dilatation of the pupil, the calabar bean sometimes proves very useful. In paralysis of accommodation, or atony of the ciliary muscle, it frequently produces complete restoration of the functions of the eye.

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* Read before the Southwestern Kentucky Medical Association at its meeting at Mayfield, May 26, 1873.

There are two conditions of the eye in which it may be used with great benefit. In ulcers of the cornea situated near the margin, where there is danger of perforation and consequent adhesion, or prolapse of the iris, the bean may be the means of preserving much useful vision, and perhaps saving the eye from destruction. A solution of the solid extract in glycerine (one or two grains to one drachm) instilled into the eye causes the iris to extend like a curtain across the aqueous chamber. Should the ulcer perforate the cornea and the iris fall against the aperture, prolapse of the iris will be averted by the tension resulting from the steady contraction of the pupil. If adhesion takes place between the cornea and the iris, it may possibly be broken loose, when the ulcer heals and the perforation closes by the alternate use of calabar bean and atropia. This condition of the eye, in which adhesions have taken place between the iris and the structures either before or behind it, is the second one I had reference to above.

The action of belladonna is, as is well known, directly opposite to that of the calabar bean. Acting through the cerebral centers, it paralyzes the ciliary muscle and sphincter pupilæ, with perhaps a stimulating effect upon the radiating fibers of the iris. It is the most certain and powerful mydriatic we possess. That the iris has little or nothing to do with accommodation was proven by the celebrated case seen by Von Graefe, in which, though there was an entire absence of the iris, there existed good vision, and paralysis of accommodation could be as readily produced in the defective organ as in eyes with perfect irides.

The sulphate of atropia in its range of usefulness in the treatment of ophthalmic diseases is, as has been well said, almost unlimited. Whether there be simple conjunctivitis, deep-seated organic disease, inflammation of one kind or another, or mere nervous disturbance resulting in pain, the atropia may be used, with a confidence which no other remedy inspires, combined with other local and general treatment, to lessen tension, relieve congestion, overcome photophobia, and put the eye in a state of rest. It alone is often sufficient to arrest and subdue the inflammation in iritis, and by its property of dilating the pupil prevent the effused lymph forming adhesions between the iris and the lens-capsule or the cornea. I have known cases of severe iritis relieved so perfectly by its use that no sequelæ whatever were left to show that disease had ever existed in the eye; cases which, had they been treated without this valuable drug, would have ended in partial if not complete loss of vision.

In order both to show this point and illustrate the antagonistic properties of calabar bean and atropia, the following case possesses some interest.

A gentleman living in Paducah, extremely myopic in the right eye, requiring a lens of three-and-a-half-inch focus for distinct vision, with nearly a normal condition of the left eye, suffered an attack of iritis (perhaps specific) in the latter. He was subjected to treatment by a man who, having been under charge of an oculist for some affection of his own eyes, came home with the impression that he had imbibed the wisdom of the doctor, and forthwith started in the practice of ophthalmology. The iritis passed off, but at the expense of sight in the eye. During the attack the pupil had remained contracted; effusion had taken place, binding the edge of the iris for four fifths of its pupillary margin to the lenticular capsule, and filling the pupil itself with a dense white plug of lymph. Vision was limited to the mere perception of light. Can any one doubt that this could have been prevented by the free use of atropia? The patient consulted me about two years and a half after the attack. By instillation of a solution of sulphate of atropia (four grains to the ounce of water) I relaxed the sphincter at the single point where it was unadherent to the capsule, thus opening up a small pupillary space through which the light could enter. The morning after the instillation he came to my office with the exclamation that I had "opened his eye to the world." I then commenced the use of calabar bean and atropia, alternately using the bean every hour for two or three hours after each instillation of the atropine; first contracting with the bean and then dilating with the atropia, making a kind of see-saw drag upon the points of attachment till I broke loose one or two small tags of lymph, making a pupil large enough and clear enough for useful vision. The solution of atropia dropped in the eye once a week is adequate to keeping the pupil sufficiently open since that time.

PADUCAH, KY.

NEUROTIC TUMOR OF THE POPLITEAL NERVE—AMPUTATION—RECOVERY.

BY GEORGE N. MONETTE, M. D.,
Visiting Physician to the Charity Hospital, New Orleans, La.

Timothy D., Irish, aged thirty-nine years, was wounded at the battle of Murfreesboro, Tenn., December 31, 1862, by a minie-ball, causing a *compound* and *comminuted* fracture of tibia and fibula about four inches below the femoro-tibial articulation. The ball ranged downward along the internal border of the right leg superficially, rendering its track very perceptible from the extravasation consequent upon the laceration of the subcutaneous tissues, making its exit between and parallel with the internal malleolus and tendo-achillis, and near its insertion into the posterior border of the os calcis. Two months afterward he could use the crutch, but could not bear much weight upon the injured member. He recovered sufficiently to enable him to work until November 8, 1865, when from extreme sensitiveness and pain he decided to have the leg amputated, which was performed by the late Dr. Nott, of Mobile, two inches below the tuberosity of the tibia. The stump healed kindly, save a sinus opposite the extremity of the tibia, which continued to suppurate for eight months afterward. In April, 1867, Dr. Nott performed disarticulation at the knee-joint after Teale's method. This stump also did well, uniting by first intention; but the patient was persistently troubled with an intense neuralgia of the popliteal nerve, as also some sensitiveness around the condyles of the femur.

In April, 1869, his suffering being intense, he entered Charity Hospital, when a large bulbous growth was found at the extremity of the popliteal nerve, forming a distinct neurotic tumor. After a thorough tonic course (ferruginous preparations and cod-liver oil), with repeated hypodermic use of the sulphate of morphia over the side of the tumor, which subdued the pain temporarily, amputation was decided upon, and one month after his admission was performed before the medical class by Prof. T. G. Richardson. I took charge of the case after the operation, as I had prior to it. The flap *(circular)* was made at the *upper portion* of the *lower* third of the femur. The wound healed kindly and rapidly. Carbolic acid (ʒj to water Oj) was used as a detergent.

Timothy was relieved of all his former suffering, and is now a resident assistant in the hospital, and wears a wooden leg without inconvenience.

New Orleans.

CHLOROFORM IN LABOR.

BY C. F. ULRICH, M. D.

On the 14th of March, 1873, I was sent for to attend Cassie, wife of Joseph Williams, colored, in her first confinement. She is sixteen years old, and quite healthy. On examination I found os uteri dilated about one inch in diameter, vertex presentation, pains regular and tolerably severe. I went home and returned in two or three hours, when I found the pains increased in severity, but the os not much more dilated. This state of things continued about four hours longer, the labor making comparatively little progress, although the pains were increasing in severity.

I now decided to give chloroform, which was accordingly administered in the usual way, the woman being in a perfectly recumbent position, her head on a level with her body. Under the intoxicating influence of the anæsthetic she struggled somewhat, but when about three drachms had been consumed she suddenly became quiet, breathing gently, like a person in a quiet, natural sleep. I then withdrew the chloroform and watched the patient. The pains ceased entirely, and in about two minutes her breathing became stertorous, and then suddenly ceased. The pulse, which up to that moment had been perfectly good, flickered, and apparently ceased altogether. I immediately took hold of her tongue and drew it out, after which I dashed cold water two or three times in her face. Each affusion was followed by a slight gasp, and finally respiration was re-established. She then awoke as one coming out of a natural sleep, and asked how she came to be so wet. The pains returned in about fifteen minutes from the time of their cessation, and continued two hours, when delivery took place. Of course no more chloroform was given, and there were no further mishaps; every thing turning out favorably, except that the woman had after-pains, which are not very common after a first labor.

LOUISVILLE.

AMPUTATION OF BOTH LEGS.

BY RAWLINGS YOUNG, M. D.

George (colored), aged eighteen years, previously healthy, had both feet terribly frosted early in December, 1872. When seen first, on the 10th of January, 1873, both his feet and his legs as high as the middle of each leg were masses of gangrenous tissue, swollen to twice their natural size, and discharging offensive, sanious pus in such quantities that it ran from the bed and stood in pools on the floor. The patient was excessively emaciated by this enormous drain, and a large bedsore covered the sacrum.

In order to build up the system, that he might undergo amputation, he was ordered tonics, stimulants, and nourishing diet, while disinfectants were applied to the parts.

He slowly improved under this treatment, and on the 21st of January the left leg, being the worst, was amputated by the circular method at the "point of election." The skin and tissues were enormously thickened, and the coats of the arteries so easily lacerated that they barely held the ligatures. Very little blood was lost, but the patient almost sank under the operation. The pulse, 105 before the operation, disappeared entirely at the wrist, and the breathing became slow and labored. Under the use of stimulants reaction was gradually brought about.

January 22d—Pulse 120, temperature 101.5°; has eaten some broiled beef-steak and stewed chicken; dressings not removed.

January 23d—Stump dressed, in good condition; pulse 125, temperature 102°; bowels moved; diet as yesterday; ordered elixir of calisaya and iron with whisky-toddy.

January 24th—Parts hot and swollen, discharging dark sanious pus; sutures removed; supported with adhesive strips and dressed with carbolized oil; pulse 120, temperature 101°; treatment continued.

January 25th—Dressed as yesterday; pulse 118, temperature 101°; tongue clean; bowels moved; wound improving.

January 27th—Wound discharging healthy pus; pulse 112, temperature 100°; appetite good; tongue clean; bowels moved.

The patient continued steadily to improve until he was considered sufficiently well on the 13th of February to bear amputation of the remaining leg, which was performed at the junction of the upper and middle third (circular method). Tissues in a better condition than in the other leg; three arteries required ligation; pulse 108 before operation, same after.

February 14th—Slept well; pulse 118, temperature 101°; no appetite; bowels moved; some pain in stump.

February 15th—Both stumps dressed; first stump suppurating and closing rapidly; recent stump in good condition, wound uniting by first intention, except small space at lower angle; not much appetite; bowels moved once; pulse 118, temperature 101°; continued previous treatment.

February 16th—First stump granulating well; last stump suppurating from lower angle of wound; appetite improving; pulse 96, temperature 98°; slept well; bowels open; tongue clean.

February 18th—Both stumps in good condition; pulse 98, temperature 100°; tongue coated; bowels not moved; ordered compound cathartic pills; ligatures have not come away from the arteries of first stump.

February 19th—Patient doing well; pulse 96, temperature 98.5°; bowels moved.

February 20th—Pus from stumps healthy; appetite good; tongue clean; pulse 90, temperature 98°.

February 21—Stumps did not need dressing; bowels being constipated, ordered a dose of castor-oil; pulse 90, temperature 98.5°.

February 22d—Stumps dressed; first stump healed to size of a silver half dollar; second stump has space half an inch long at lower angle not closed; patient improving in flesh; pulse 87; temperature 98°.

February 24th—Both stumps dressed; ligatures have not come off the arteries in first stump; appetite good; pulse 92, temperature 98°; tongue clean; bowels open.

February 27th—Dressed both stumps; removed one ligature from last stump; first stump healed to size of a quarter dollar; granulations healthy; last stump suppurating but little bowels open; pulse 92.

March 8th—Two ligatures still remain in first stump; scarcely any suppuration from either; one ligature remains in last stump; last stump will be entirely healed before the other, although amputated three weeks afterward. Patient getting fat; skin looks healthy and sleek; no fever; appetite good; is cheerful and able to sit up.

March 9th—Ligatures from first stump came off to-day; no suppuration; both nearly healed.

March 13th—Ligatures all off; both stumps entirely healed; no tenderness about them; patient sits up; was discharged one month from date of last operation.

CORINTH, MISS.

Reviews.

A Treatise on the Principles and Practice of Medicine.

By Austin Flint, M. D., Professor of the Principles and the Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College. Fourth edition. Philadelphia: H. C. Lea. 1873.

This admirable work no longer needs the commendation of the press, and the fourth edition will increase its popularity. Its laborious author, who grasped the whole subject of medicine in his mind at first with wonderful success, continues to add to his work the results of his own clinical studies, and the contributions to medical science and practice made in all countries; so that the reader is sure of finding in it all the latest words on medicine. Not only for the student is it the best text-book extant, but the practitioner can find no other volume in which the science and art of medicine are presented with so much clearness in so condensed a style. In every respect it is the book on practice for American physicians.

A Treatise on the Diseases of Refraction and Accommodation.

By C. S. Fenner, M. D., Louisville, Ky., late of Memphis, Tenn.

This is a neat pamphlet of twenty-nine pages, and purports to be a *resumé* of the present state of that department of ophthalmic science which is embraced in the title. We propose to examine this work somewhat critically and in detail. Our wish is to do so impartially. We would by no means do injustice to the author, but the duty which we owe to science constrains us to expose any errors which might lead astray. Upon most subjects pertaining to our profession it is well known that differences of doctrine and practice obtain among authors. It will be seen that the affections of the eye afford no exception to this rule.

Our author, on the first page, makes this remark: "Many cases of amblyopia that a few years since would have been considered as incurable are now entirely relieved by neutralizing the aberrations of refraction by appropriate lenses." We had been under the impression until now that amblyopia in its various forms belonged to the retina and not to the refracting media. In fact Dr. Bull, a distinguished specialist of New York, and many others, the writer among the number, have during the past two years been experimenting with strychnine hypodermically in the hope of curing this too often intractable disease; and we have even thought that in some cases of amblyopia arising from disuse of the eye, on account of squint, occlusion of the pupil, and the like, after removing the cause of the disuse, the strychnine did good, and might take rank as a curative agent. But with the light afforded by the work before us we can adjust a suitable glass behind which amblyopia vanishes, is absorbed, carried away, like the once famous "tewhadiddle" in the gastronomic apparatus of the late Dr. Kitchener. Very strong convex glasses used for a few minutes at a time, as a means of arousing the dormant powers of the retina, and not with a view to the correction of any real or supposed aberrations of refraction, have long been a recognized means of relief in cases of recently developed amblyopia resulting from disuse of the eye.

In the next sentence after the one devoted to the subject of amblyopia we are told by the author that "it is definitely settled that the inherent power possessed by the eye of adapting itself to see an object clearly and distinctly at different distances is due to the voluntary action of the ciliary muscle on the crystalline lens, causing the latter to change its curvatures as the object approaches or recedes from the eye, so that within certain limits diverging rays coming from it are united in a focus on the retina."

We had always supposed that union of the rays constituted the focus, no matter where that union occurs, whether "in a focus on the retina" or in any thing else. It is indeed generally believed and taught by most of the eminent oculists that the ciliary muscle is one of the prime factors in the production of the accommodative effort; but this is not definitely settled, to say nothing of that muscle's power to "act on the crystalline lens." To do this there must needs be contact of the thing acting with the thing acted upon; and we are sure Dr. F. will not say that the ciliary muscle and crystalline lens are in actual contact. Professor C. McNamara says: "It seems to me if the anterior surface of the lens alters its convexity in accommodation, it has hardly been demonstrated that the ciliary muscle effects this change;"* and he states that accommodation takes place by means of "an inherent power, resident in the crystalline lens, analogous to that which exists in voluntary muscle." Donders, in his treatise on the "anomalies of accommodation and refraction," quotes the various opinions of investigators, and very cautiously avoids expressing a definite opinion as to the question at issue. He says: "But the mechanism whereby the contraction of this little muscle"—meaning the ciliary muscle—"alters the form of the lens is, to however small a compass the question may now seem to be reduced, not yet satisfactorily and convincingly brought to light." After quoting the theories of Helmholtz and H. Müller (which are received as the most plausible yet offered) Donders continues: "Against these two theories I have difficulties which I shall not further develop. It would, moreover, be easy to bring forward other hypotheses, but from this too I shall refrain." Soelberg Wells says: "There being now no doubt that the accommodation of the eye is due to a change in the form of the lens, the next question is, by what means is this change produced? And this brings us to the consideration of the much-debated but yet unsettled question of the mechanism of accommodation."* And while he evidently inclines to the theory of Hencke, he does not himself attempt a solution of the question. Many other authorities might be cited to show that it *has not been "definitely settled* that the ciliary muscle acts on the crystalline lens" so as to produce any effect in the accommodation of the eye whatever.

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*A Manual of Diseases of the Eye, second edition, page 16. 1872.

The following account (page 12) of the anatomical relations of the recti muscles to the eyeball contains, to put it mildly, some strange statements: "I believe that the strong contraction of these muscles (recti), attached, as they are, anteriorly near the margin of the cornea, and posteriorly around the optic foramen, with their broad bellies resting on the equator of the partially-yielding eyeball, lessens its transverse diameter and slightly increases its length in the direction of its optic axis." Now it is positively known that the recti muscles are inserted into the sclerotica at an average distance of more than one fourth of an inch from the corneal margin, which makes the scleral attachment of the recti muscles only 1½″ anterior to the equator of the globe, while that portion of the muscles just at this equatorial line are tendinous, so that their bellies are not in contact with the eyeball at any point.† Then, instead of the "strong contraction" of the recti muscles having the effect to lengthen the antero-posterior diameter of the eyeball, such muscular action is known to produce just the contrary effect. Almost all late writers, and especially Donders, whom the Doctor professes to quote in more than one instance, say that hypermetropes may often be recognized by their retracted eyes; thus proving at once, without further argument, that contraction of the recti muscles consentaneously is equivalent to a perceptible diminution of the antero-posterior diameter of the eyeball, and is consequently very commonly seen in far-sighted persons. The following statement is made by Dr. Fenner:

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* Long, Short, and Weak Sight, and their Treatment by the Scientific Use of Spectacles, page 34. 1869.

† The Anatomy and Histology of the Human Eye, by Prof. A. Metz. 1868.

"According to Donders, presbyopia commences when the near point has receded beyond 8″, and this rule has been generally adopted. I am satisfied that in this country, particularly in the South and West, the normal visual angle is less than five minutes. From a large number of tests, I have found that most persons have clear and sharp sight with a visual angle of four minutes. In Germany, and some other European countries, the inhabitants are proverbially short-sighted. An angle of five minutes is the smallest one (except in small children) at which they can ordinarily see with distinctness."

The Doctor makes these announcements without even hinting at the number of tests he made, what sort of tests he applied, when he made the tests, what class of people he tested, where he tested them, or any thing else that would tend to establish the assertion as a fact that the people of "the South and West" have a "normal visual angle of 4′." Now we do not mean to doubt that Dr. Fenner believes he is right, but we do very seriously doubt whether it will be believed that his observation and tests have been sufficient to establish "that as a people we are far-sighted." He says: "It is rare to find one here under thirty-five years of age who can not easily read No. 1. of Snellen's test-types at 20″ and No. 20 at 30′, far more exceeding this than falling short of it." Then, according to this, Snellen's test-types are improperly graded for the determination of the acuity of vision; because they were constructed on the supposition that Hooke, in his estimate of the normal visual angle, was correct. In order to determine the value of Snellen's test-types, Dr. Vroesom de Haan subjected two hundred and eighty-one persons between the ages of seven and eighty-two years to examination, and found that from ten to twenty years of age, $S=\frac{22\frac{1}{2}}{20}$; at thirty years of age, $S=\frac{22}{20}$; at fifty, $S=\frac{18}{20}$; at sixty, $S=\frac{14}{20}$; at eighty, $S=\frac{11}{20}$; but no one supposed that this altered the principle upon which the normal visual angle was fixed at five minutes. On the contrary, it shows that while five minutes is the adopted standard, some persons can see within finite limits under an angle of less than five minutes. McNamara "takes as unit for comparison the recognition of letters seen at an angle of five minutes," and recognizes the fact that some persons can see under a smaller angle. So then it appears that the Dutch and Hindoos, as well as Americans, have superior vision to the Germans. But, unfortunately for Dr. Fenner's discovery, Snellen is not a German, but a Dutchman, living in and writing at Utrecht, in Holland. Donders likewise gives us in his estimate the state of vision possessed by his own countrymen, viz., the Dutch; so that it does not appear where our author learned that they (the Germans) are "proverbially near-sighted."

Under the head of astigmatism Dr. F. says (page 22) that to detect this "Graefe invented an optometer, composed of fine wires crossing each other at right-angles." The Philosophical Transactions for 1793 inform us that Thos. Young, the discoverer of astigmatism, made use of the wire optometer in the examination of his own eye. Graefe was born thirty-five years after the use of the wire optometer was published to the world by Dr. Young.

But we pass now to the most remarkable of the many remarkable statements contained in this treatise. Under the head of "remarks" this occurs:

> "For most of our knowledge of the diseases of refraction and accommodation we are indebted to the researches of that wonderful people, the Germans, who at the present day surpass all other nations in diving into the hidden depths of nature, in order to investigate the mysterious secrets of her workings, and then applying the knowledge thus attained to benefit mankind and to relieve

human suffering. Among those worthy of all honor in connection with the subjects of this article I would mention Helmholtz, Donders, Graefe, Knapp, Arlt, Stellwag, Jaeger, and Hering, who, with their fellow co-laborers, have in less than a quarter of a century, built up an entirely new science in this department of ophthalmology."

The subjects treated of in the pamphlet under review are Refraction and Accommodation, Myopia, Hypermetropia, Presbyopia, Astigmatism, and Asthenopia; and in order to be able the more fully to appreciate the exact value of Dr. Fenner's statements about the Germans, etc., I find it necessary to examine briefly into the history of our knowledge of the various subjects above named. In the first place, Ptolemy, who wrote an elaborate treatise on "Astronomical Refractions" early in the second century, tells us in his first book, which is devoted to the consideration of "Single Binocular Vision," etc., that deviations in the optic axes produce double images; and he even took into consideration the visual angle under which certain objects appeared to his vision; for instance, he calculated and formed tables by which the "sun, moon, and planets" might be understood in their relations to each other and to the earth. It is pretty generally admitted that spectacles were invented by Roger Bacon, the monk, commonly called "Friar Bacon," who was born in 1214, while the precise date of his invention is not positively known. Most writers have agreed that it was prior to 1285. Almost the only writer of the present day who disputes Friar Bacon's claim to the invention is Dr. Colange; and he allows that spectacles were invented about 1285, though he thinks the credit due to Alexander de Spina, a Florentine monk. Enough is positively known to establish the date of their invention at an earlier period than "within less than a quarter of a century." Maurolycus, of Messina, made the science of optics a special study; and in his treatise on refracted light, published in 1554, we find the explanation of the real cause of near and far sight fully set forth. Maurolycus was thoroughly acquainted with the refractive powers of spherical lenses, as well as the means of correcting long and short sight; so that this author and not Kepler—who wrote in 1601 and 1604 on the subject—is really entitled to be called the discoverer of short sight—myopia. J. Baptista Porta, who lived about the same time with Maurolycus, is famous for having invented the camera obscura, and for his numerous essays on optics, in some of which he compared the eye to the camera obscura. Kepler, taking advantage of these great discoveries, was enabled to trace the formation of images in the eye to the retina, but not until 1668 was it known that the optic disk takes no part in the act of vision. Mariotte communicated his discovery of the insensibility of the optic disk to light to the Philosophical Society in that year.*

Augustæ Vindelicorum published, in 1611, a clear, concise, and very complete system of "Physiological Dioptrics," in which the necessity of change of form in accommodation is demonstrated. He says, in his Propositio LXIII., "it is not possible that the retina, maintaining the same position in the eye, should receive a defined image both from near and from remote objects." Thus he reasoned out one of the most important facts connected with the act of vision, and showed that near and far-sighted persons both have a limited power of accommodation, and that therefore their vision was defective. He thought, if they had full accommodative power, they could control the refractive state of the eye in the manner, as he supposed, that (emmetropic) persons do. He did not recognize malformation of the eyeball as having even an existence, but thought that the recti muscles, when strongly contracted, so flattened the eye as to diminish its refraction and accommodate it for viewing objects at a distance. Relaxation of these muscles, he thought, had the effect to increase the refractive power so as to accommodate for very near objects. This was the prevalent opinion as to the nature of the changes of the dioptric system in accommodation until 1801. Thomas Young* demonstrated the fact that the power of accommodation is due to a change of form in the crystalline lens. This discovery of Young's was not very generally accepted until after the invention of the ophthalmoscope in 1851; because physiologists were unable to explain how a change in the form of the crystalline could take place. The science of entoptics, by means of which the nature and situation of muscæ volitantes has been clearly defined, was first taught by a Jesuit priest, Father Dechales,† who, being myopic, saw his entoptic spectrum "in the circle of diffusion of remote points of light, and fully comprehended and explained what he saw." He showed, in a clear and concise manner, that muscæ volitantes observed in ordinary vision depend upon corpuscles situated very near the retina, or upon a morbid condition of minute portions of the retinal tissue.

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* Philosophical Transactions, vol. iii, page 668.

In the posthumous works of Hooke (1705) the physiological importance of a fixed visual angle is for the first time clearly set forth. He was the first to suggest the importance of a fixed angle by which to establish the true test of the acuity of vision, and actually tested in this way the visual power, separately, of one hundred persons. This is what led afterward to the invention of test-types. Snellen has adopted Hooke's idea, and made his test-letters of cubes, representing the exact angle of five minutes for the varying distances at which the different-sized letters are expected to be seen. For instance, No. 1 at twelve inches of the Paris scale, No. 2 at two feet, and so on. Helmholtz devised a test by means of wires varying in thickness, somewhat after the idea of Young's optometer; some of the wires so small as to be seen at one foot distance only, and so on, gradually increasing in size according to the distance at which he desired to test the individual's vision; and at the same time he calculated the angle by the size of the space between the wires. Graefe improved this somewhat, and constructed an optometer composed of a "small square steel frame, across which a number of delicate parallel, vertical wires are stretched. This frame may be attached to a brass rod (graduated in inches and feet) upon which it is movable, or it may be fastened to a graduated tape." This was never very generally adopted.

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* Philosophical Transactions, vol. xcii, page 23.

† *Cursus.s. Mundus Mathematicus, Lugduni*, 1690.

Just here, before dismissing the subject of test-types, we would mention that those now in almost universal use were devised by Snellen, a Dutchman, of Utrecht. (It is important to note that he is not a German.) Porterfield, in a treatise on the eye, published in Edinburgh in 1759, established the connection between convergence of the visual lines and accommodation, and described in a masterly manner the condition now known as asthenopia. Buffon, in 1743, in the Academy of Sciences, Paris, explained squint on the principles of anomalous refraction, and made known the fact that the refraction of the two eyes in squinting persons differs; thus showing why one eye should be excluded from binocular vision rather than the other. In a "Complete System of Optics," published in 1738, Dr. Robert Smith showed on scientific principles the necessity of taking into account the *range of accommodation* in the adjustment of glasses to defective eyes; *i. e.*, for the correction of near and far sight. Janin, of Paris, in 1772, first described hypermetropia, which was afterward more fully elucidated by Wells (1811) and James Ware (1812). Thomas Young discovered *regular astigmatism*, and the means of relieving it by the use of a spherico-cylindrical lens (1793); and the Royal Astronomer, Airy, discovered *compound irregular astigmatism*, and the means of its relief (1827). We find the late president of the Royal Academy, Benjamin West, Esq., an American painter, wearing "divided glasses for many years before his death" (1820); "the upper half of the glasses was thirty inches focus, the lower half twelve. When he was about ninety years old he had the lower half of only eight inches focus, in order that he could thereby see to read."* In 1830 McKenzie says† that "preternatural elongation of the eyeball is an efficient cause of myopia, and has even been regarded by some as the only admissible cause." Donders, in speaking of this, says "he does not know who these *some* are." It is also known that Scarpa (1801) described two cases of posterior staphyloma.

We believe we have thus shown that all the matters treated of by Dr. Fenner were known to the profession more than "a quarter of a century ago;" and that the Germans had nothing to do with their discovery, except in the single instance of the ophthalmoscope, by Helmholtz, in 1851. D. S. R.

The Microscope and Microscopical Technology. A Text-book for Physicians and Students. By Dr. HEINRICH FREY, of Zunch, Switzerland. Translated from the German by Geo. R. Cutter, M. D. New York: William Wood & Co. 1872.

The microscope and its revelations has been the subject of many a volume. There are books devoted to its consideration, small and great, carefully prepared and hastily thrown together; some that are cumbered with a mass of rubbish and dry details, in which it is difficult to find a single practical fact, and others that are readable and lead the student into the direct path of information most desired. In these days of the railroad and telegraph, when all is flurry, we can not afford to delve through such immense magazines as Hassal, Quekett, Beale, and Stricker to find the single grain of wheat; but in our necessarily hurried researches we anxiously look for something plain and practical. The book under review is a treasure in the latter regard.

As a text-book, Dr. Frey's is a safe, practical guide to the beginner, as well as to the adult, in that branch of our art of which he treats. It is all that could be desired. We see nothing in it of German transcendentalism, of straining on theoretical points, and undue magnifying of little things; but every thing is calculated to inspire the reader with a love for microscopy, and with a sense of its importance. To those who are so unfortunate as to be without a scientific education the remarks on the principles of optics as applied to the microscope will be found most opportune and valuable. Ignorance of these principles often leads to bungling in the management of the instrument, and eventually to its abandonment in disgust. This is effectually done away with by a lucid explanation on the part of the author.

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* Dr. W. Kitchener. † Treatise on the Diseases of the Eye, page 718.

The work is divided into sections conveniently arranged. Commencing with the theory of the microscope, it closes with sections on the microscopy of the various tissues in the physiological state. There are also parts devoted to a description of the different kinds of microscopes now in use, to chemical reagents, to the injection of specimens, to the mode of mounting, etc. In all these departments of the subject the author is full, clear, and eminently practical. We have rarely seen a work where one can find so much to assist him in his studies. The use of the microscope is indispensable to the conscientious physician. With such a guide as Frey's text-book there can be no excuse for ignorance of so important a branch of our science.

The work is profusely illustrated, there being three hundred and forty-three well-executed engravings. The translator, Dr. Cutter, has done his part well. Translations are very often obscure, for the reason that the meaning of the author in the original text is not fully understood. We find very few such defects in the work before us.

The publishers deserve great credit for the magnificent style in which they have dressed this edition. It is a fine, large octavo, beautifully bound, in plain, bold type, and on elegant, heavy paper. C. R.

Clinic of the Month.

EXCERPTA FROM GERMAN PHARMACEUTIC JOURNALS by Mr. C. Lewis Diehl, Professor of Theory and Practice of Pharmacy in the Louisville College of Pharmacy.

Carbolic acid—Otto Facilides resorts to glycerine for the liquefaction of carbolic acid. Ten per cent. of glycerine is added to the pure crystallized acid, which is then melted by gentle heat and mixed by agitation. Carbolic acid so liquefied will not again congeal at ordinary temperatures, and is regarded as preferable to acid liquefied by the addition of a small percentage of water, alcohol, or ether.

Storax—For external uses the storax should, according to Otto Facilides, be mixed with an equal volume of oil (sweet-oil, oil of sweet almonds, etc.), and after gently heating strained. In this form it is especially recommended in the treatment of scabies in adults. For children the author recommends that its effects should be modified by mixing the storax as above diluted with an equal volume of a mixture of one part boiled yelk of egg and one part glycerinum amylum.

Adhesive plaster—According to the same author, adhesive plaster, which has become brittle by age and has lost its adhesive qualities, may be rendered adhesive again by coating it with oil of turpentine by means of a sponge, and leaving it exposed for a day.

Maschi—By this name is known a terrible poison used by the Serekongs (natives of British Guiana). According to K. F. Appun, it is prepared from the tubers of *arum venenatum W.*, by drying them in the sun, powdering, and pressing into quills. The tuber is so virulently poisonous that by merely touching it a violent burning sensation and severe cutaneous eruption results. According to the dose given, the person may live for months, or he may die in a few hours, suffering terribly. It is administered with food and drink, or by applying it to the lips of the object while sleeping.

Sponges—That have been used are best cleaned, according to Bouchardat, by immersion into a four-per-cent. solution of permanganate of potassium, subsequent immersion in a solution of one part sulphurous acid in three parts of water, and final washing in pure water. Sponges so treated resume their original color and softness.

Pills for tape-worm—Peschier's pills for tape-worm are prepared by forming a pill mass with 1.6 gramme ext. filicis æth. and 1.6 gramme pulv. rhizom. filicis, dividing the mass into twenty pills, and rolling them in lycopodium. Dose, ten in the morning and ten at night; following the last dose with a clysma of two grammes ext. filicis emulisionized with fifteen grammes gum arabic and sufficient water.

Opium—In view of the fact that the poppy as it ripens gradually loses its morphine, so that when perfectly ripe no morphine, or but a trace of it, remains, O. Hesse arrives at the conclusion that the substances (active?) found in opium are not originally contained in the juice, but are formed during its collection, etc. He agrees with Eatwell, who has experimented with the fresh poppy-juice, that the morphia strength of the juice is increased subsequent to its collection when carefully manipulated, while careless treatment will have the reverse effect.

Propylamina, which has latterly fallen into almost entire disuse, is, according to Namias, of sufficient value in the treatment of disease to merit extensive application. In the treatment of various forms of rheumatism the author has found it uniformly reliable. He also finds it remarkably active in reducing the action of the heart, regards it superior to digitalis, and preferable, if for no other reason, on account of its comparative harmlessness. Its action upon the urinary secretions is similar to that of digitalis.

Cod-liver oil—According to Duguesnel, the addition of tincture of eucalyptus globulus, in the proportion of one or two per cent., has the effect of disguising the taste of cod-liver oil to a marked extent, renders it more easily digested, and removes the inclination to eruptation so frequently observed when pure cod-liver oil is taken. Owing to the extreme volatility of the aromatic constituents of the tincture, the mixture must be kept in well-stoppered bottles.

Unguentum ophthalmicum rubrum—According to Ullersberger, unsalted butter is the best excipient for hydrarg. oxid. rubr. for eye salves. The butter for this purpose is mixed with pure hot water in a glass vessel, the oily fat separating is removed and mixed with one fourth its weight of white wax. The ointment must be prepared extempore.

Quinia—The bitterness of sulphate of quinia is, according to H. Hager, disguised to a great extent by employing the following mixture: one part sulphate of quinia, one hundred parts of cold coffee, thirty to fifty parts of chloroformated syrup.

Chloroformated syrup is prepared by mixing five parts of chloroform, thirty parts of alcohol, and four hundred and fifty parts of simple syrup.

Lactucarium and thridacium—L. Buttin has made the following comparative examinations of French lactucarium (from lactuca sativa), of German lactucarium (from lactuca vivora), and of thridacium (obtained by expression and evaporation of the juice of lactuca sativa):

One hundred parts.	German Lactucarium.	French Lactucarium.	Thridacium.
Ashes, ...	10.63	7.50	33.90
Soluble in alcohol, 80 per cent.,	46.66	46.85	39.50
Soluble in water, ...	48.83	21.42	complete.

The difference in the solubility in water of the two varieties of lactucarium and the large quantity of ashes of the thridacium are noteworthy.

Leeches—Dr. E. Enders finds that leeches keep perfectly well in water containing water-plants, the latter serving the purpose of purifying the water by absorbing the ammonia produced from the mucus of the leeches. Ordinarily the water has to be changed every two weeks only, and in winter every three weeks will suffice. Dr. H. Ludwig suggests that when so kept it is necessary to keep them exposed to diffused daylight, and not in the dark, as is usual.

PROPHYLACTIC TREATMENT OF SCROFULOUS GLANDS. — In the Medical Times and Gazette is contained an abstract of a paper (Practitioner) by Hueter, of Greifswald, published in the *Klinische Vorträge* of Volkmann. In this Prof. Hueter maintains that a scrofulous individual is one who is liable to a repetition of ordinary inflammatory processes, which at the same time tend to spread locally and to be indefinitely protracted in their course. He would refer these liabilities entirely to a peculiar anatomical condition of the skin and mucous surfaces, and of the lymphatic system, frequently and familiarly expressed by a delicate or pasty appearance, especially in children. There is, he contends, no specific scrofulous poison. The culminating point of scrofulosis is when the enlarged glands in the neighborhood of the superficial inflammation become cheesy. Scrofula now becomes dangerous to life by presenting a source of tubercular infection. Hueter goes on to say that the resolution of a caseous gland is very rare. More commonly the gland becomes the seat of subacute suppuration, ending, as a rule, in the evacuation of a cheesy matter and the formation of a fistula. But instead of this protracted course there may be the rapid and certainly fatal termination first mentioned. Either before or after the opening of the abscess fever, with dyspnœa or head symptoms, may suddenly inform us that the scrofulous patient has become tubercular and is dying. The tubercles have been developed from granular particles which have entered the circulation from the caseous gland through the lymphatic paths opened by the suppuration, and have become impacted in the capillaries or *saftcanälchen* of the lung or brain, or some other part of the body. The practical conclusions which Hueter draws from such considerations as the preceding are, that, besides treating the scrofulous habit and the local inflammation, we are bound to do more to those glandular sources of infection than has hitherto been attempted. If they do not resolve with general treatment—as we should give them a chance of doing when they are small—and if iodine injection (which may be tried in some cases) has failed, then we must use iron, "not in solution, but in the shape of a scalpel." The enlarged gland is to be excised. The operation is not difficult; the gland is easily enucleated when once its surface is freed. Hueter never had severe hemorrhage, never lost a patient out of many, and declares that recovery is speedy. The most urgent indication for excision is the advent of suppuration. Should the abscess have formed it must be freely opened, after which, if a fistula remains, the gland must be extirpated. The arguments in favor of the removal of scrofulous glands apply with equal force to the speedy operation in orchitis, fistula in ano, etc., in which cases also Hueter would recommend cauterization after section. As for the glands of the mesentery and bronchi, and the foci of scrofulous pneumonia in the chest, they are beyond the reach of the surgeon, and must remain, it is to be feared, as a constantly threatening source of general tuberculous infection.

ARSENICAL MUCILAGE IN CANCER.—Dr. Alex. Marsden ("A New and Successful Mode of Treating Cancer") says of this mode of treating cancer:

"The arsenical-mucilage mode of treatment is applicable to all forms of cancer, except the cystic or colloid, provided they have not exceeded certain limits — viz., four square inches—and then not more than a fourth must be attacked at once. When a cancer has exceeded this limit I know of no means that ought to be used to extirpate it but the knife; and it must not be supposed, because I so strongly recommend the arsenical mucilage, that I would discard the use of this instrument altogether, for in some cases it is our only hope. The paste may be applied to cancers situated on any part of the body except inside the mouth or nose—parts, in fact, where the use of the curative agent would be dangerous. I do not recommend its use when the disease is deeply seated, but for many cancers on or near the surface this mucilage is the least painful and most certain remedy I know. During the last seventeen years I have fully tried every known caustic, and now firmly believe that this is the best.

"The mode I adopt is as follows. A thick paste of arsenic is made according to the following formula:

℞. Arsenious acid, ... ʒ ij;
Mucilage of gum acacia, . . ʒ j.

To be well mixed together, and made into a thick paste.

The patient's health having been attended to, the whole of the cancerous surface is to be spread over with this paste, provided it is not more than a square inch, and it must be sufficiently thick not to run. A piece of dry lint is then pressed on to it, overlapping the paste half an inch all round. This must be left for a short period — say ten minutes—by which time any superabundant paste will have been taken up by the extra lint, which is then to be carefully cut away with a sharp pair of scissors. In an hour, or at most two, the lint covering the paste will have become dry and hard, and it will adhere closely and firmly to the cancer. In the course of twenty-four hours the surrounding parts will commence to swell, become red, and to a certain extent inflamed, and the patient will experience a drawing pain. In general this is by no means severe, and does not last more than one or two days. At the expiration of from forty-eight hours to three days, according to circumstances, bread-and-water poultices are to be constantly applied and changed every two or three hours. The pain, redness, and swelling will by this time have subsided, and a distinct line of demarkation be seen extending entirely around the cancerous mass; the skin ulcerates and a fissure is formed, separating the slough from the healthy tissues; the fissure continues to deepen until the entire cancer comes away, leaving a healthy cup-like depression, varying in size and depth according to the mass removed. Healthy granulation will now commence, and it will be well to continue the poultices for some time; indeed it often happens that no other application need be used. Of course we must be guided by circumstances; for granulation proceeding too rapidly, too slowly, or in any abnormal manner, must be treated according to the known rules of surgery. Great diversity will be found as to the time of the slough coming away. In cases of small extent, and not extending deeply into the tissues, the periods will vary from six to fifteen days, but in those of greater size from twelve to thirty. In some instances only one application of the paste will be necessary, but it will in general be found advisable to apply it every second or third morning till the desired effect is produced. No rules can be laid down as to how often this must be done; the experience of the surgeon and the progress made must decide. When it is intended to re-apply the paste, the former piece of lint must be carefully soaked for some time with warm (not hot) water, and after it has come away the mucilage be used as before; recollecting that until the last application that is intended has been made poultices as a *rule* are not to be used unless under special circumstances, and that after a decided line of demarkation has been formed no more paste is to be applied. In general it will be found that after the slough has come away the whole of the disease has been removed; but sometimes this will not be the case, and then the mucilage must again be had recourse to; in others it will be found desirable to remove a portion of the dead cancer before another application of the paste. This, however, is only necessary when the cancer becomes hard and callous, and will not allow it to penetrate. I have also used this remedy in some cases after operation by other means.

"One of the most pleasing and wonderful phenomenon connected with the mucilage is the extraordinary power of election it appears to possess; for if put on with only ordinary care the cancer alone is attacked, the healthy structures remaining untouched, and the disease ultimately rolling out of a perfectly healthy wound.

"This treatment I have used with equal success in cancer on the lip, face, head, arm, hand, abdomen, breast, penis, testicle, labium, scrotum, and foot. I have never seen any bad results from its use except in one case, and in this the evil was temporary only. At the same time I must caution those who are inexperienced in its use that it is a dangerous remedy in unskillful hands, and requires constant watching. Neither can it be used, as I before stated, to cancerous surfaces of greater extent than four square inches, and then only a small portion must be attacked.

"Many cases of scirrhus and medullary cancer are amenable to this treatment, particularly at an early stage, but to the epithelial it is peculiarly adapted. It is true that this form of cancer is frequently found to attack the tongue, and that except in the earlier stages of the disease carcinoma of this organ presents to the surgeon a truly difficult task; but on other parts of the body we have this variety under very great control. I may say that a patient suffering from epithelial cancer, coming under treatment at any thing like a reasonable time from the first attack, may, in nine cases out of ten, feel sure of a perfect restoration to health."

HYPODERMIC ATROPIA IN CHOLERA.—The following, from Dr. R. Saunders, of Paducah, Ky., a practitioner of age and very great experience, though not written for publication, will, we are sure, make very interesting reading just now to physicians who are dealing with or anticipating the approach of cholera:

"In the recent outbreak of cholera in Paducah I treated a number of cases by sulphate of atropia hypodermically—one fiftieth to one thirtieth of a grain in water—with the happiest results. The more distressing symptoms—vomiting, purging, and cramps—were relieved almost at once, followed by refreshing sleep, continuing in some cases for several hours. I found these effects, however, to follow only when the atropia was used in sufficient quantities to produce the specific scarlatinal rash, dry throat, and dilatation of the pupils. In some cases the relief afforded was astonishing; the skin grew warm, the pulse rose, the surface, previously clammy and shriveled, assumed its natural condition, and in some instances the patient slept soundly for ten or twelve hours, the bowels remaining undisturbed during the entire time. Of course you will not understand me as advocating the exhibition of the atropia to the exclusion of all other means, especially the use of calomel, to which I attach much importance. In the first case in which I gave the atropia I combined it with morphia (one fortieth grain of atrop. sulph. to one sixth grain morph. sulph.), and I think the combination is better perhaps than the atropia alone."

PROPYLAMINE.—Propylamine has of late been much recommended as a remedy for acute rheumatism. It has a most horrible taste, and in any but the most minute doses is liable to produce severe gastralgia. Being so irritating, it is not very suitable for subcutaneous injection. Propylamine was discovered by Wertheim in 1850. It can be obtained artificially by acting on the iodide of propylene with ammonia;

naturally, by extracting it from those substances which contain it. It is met with in the flowers of *Cratægus oxycantha*, in the fruits of *Sorbus aucuparia*, in the *Chenopodium vulgare*, and in the ergot of rye, etc.; but it exists in greatest abundance in herring brine, where it is combined with an acid, from which it may be separated by distillation with potass. It is a colorless, transparent liquid, with a strong ammoniacal odor, soluble in water, and presenting even in weak solutions a strong alkaline reaction. It combines with acids to form crystallizable salts, and, like ammonia, produces dense fumes when brought into contact with the vapor of hydrochloric acid. Dr. Aweuarius, of St. Petersburg, was the first who employed propylamine in the treatment of acute rheumatism. In the two years from 1854 to 1856 he treated successfully two hundred and fifty patients suffering from acute and chronic rheumatism. He avers that all pain and fever had in every case disappeared the day after employing the remedy. More recent experiences have not confirmed this wonderful success, still some believe it to be highly useful. The dose is one to two minims three or four times a day; and the taste is said to be most successfully disguised by oil of peppermint. (Edinburgh Medical Journal.)

Calabar Bean in Constipation.—M. V. Subbotin recommends *(ibid.)* in cases of constipation the following formula:

R. Ext. physostigmæ ven., . . . gr. iij;
Glycyrinæ, ... f. ʒij.
M. S. Four drops four times daily.

Notes and Queries.

DELIVERY OF THE HEAD IN BREECH PRESENTATION.—Dr. Hannibal Landon, of Ligonier, Ind., in a very interesting communication addressed the editors of the American Practitioner, advises the following practice in the delivery of the head in breech presentations, and states that he has proved its value in numerous cases.

"Breech presentations occur once in sixty times, and the mortality to children is about one in three and a half. The dangers to the child are from compression of the cord, detachment of placenta, inertia of the uterus after the body is born, etc. The remedy is *rapid* delivery. But you may not have the advised forceps at hand; you have, however, your fingers, which can be more promptly and successfully used than any instruments. This is the method of proceeding. The infant's body is delivered with its back superior, the patient lying upon her back. First draw the cord down a little way; then, if the head has passed the superior strait, the face is in the hollow of the sacrum; if not, bring it down, according to the usual rules, as rapidly as possible. Then introduce the index-finger of one hand into the mouth of the child, drawing the chin down, at the same time with the fingers of the other hand push the occiput up, thus securing perfect flexion. This accomplished, the face of the child will present at the vulva; and immediately withdraw the finger from the infant's mouth, and pass two fingers into the rectum of the patient, and you readily reach the vertex and use these fingers as a lever, lifting *upward* and *outward*, while a similar movement is communicated to the body of the child with the other hand placed below it. If you are on the patient's right side, your index and middle fingers of the right hand will be against the vertex of the child; if upon your left, those of your left hand. If unfortunately you have failed to deliver the body with the back superior, and you have the face toward the pubes, the same general steps are necessary, save that the finger of your right or left hand, as the case may be, should be *kept* in the child's mouth while the upward and outward movement is made with the fingers on the vertex. This method of delivery is applicable to all cases where the body of the child is born first. By it the head can be delivered in less time than required for the application of forceps, and it is much safer for the mother at least. Experience makes me confident of the superiority of this method. Pursuing it, I have never lost a child in breech presentation or in podalic version." T. P.

DIFFICULT LABOR FROM HYDROCEPHALUS.—We are indebted to Dr. S. C. Rodgers, of Concord, Tenn., for the report of this case. The patient, twenty-six years of age, was taken in labor when in the eighth month of her fifth pregnancy. The midwife who was in attendance failing to deliver, Dr. Rodgers was sent for, who found a breech presentation, the body having been born for five hours, the child of course dead, and the delay in the delivery of the head arising from its being enormously distended from hydrocephalus. "The face of the child was lying in the concavity of the sacrum, and the vertex extended above the symphysis. Delivery of the head was effected with some difficulty. The cranial bones were widely separated, and seemed as if floating in a sac of fluid. With the exception of great nervous prostration, the patient seemed in good condition; but in the night two severe rigors occurred, followed by acute pain in the hypogastric region, great tenderness of the uterus, restlessness, excessive irritability of the stomach, scanty and offensive lochia, icterode skin, sordes upon the teeth, etc., death closing the scene at the end of three days." The prime value of Dr. R.'s case is that it illustrates most forcibly danger from delay in the second stage of labor.

As to *hydrocephalus in relation to parturition*, Depaul, in a recent lecture upon the subject, states that when the breech presents and the body is born, under the influence of traction to deliver the head, the liquid may pass from the interior of the cranium under the scalp, owing to the separation in the track of the sutures or fontanelles, or fracture of the osseous plates. From that moment all difficulty ceases, and the head is born soft, elongated, and depressible; or the liquid after passing from the cranial cavity may burst through the scalp. A more curious termination is that in which the fluid finds its way into the cellular tissue of the neck and chest; sometimes too it may pass into the pleural cavities. T. P.

LOUISVILLE COLLEGE OF PHARMACY.—This excellent institution enters on its third session under the most favorable auspices. The faculty is composed of men of experience and well-known ability in the branches which they teach, while every name connected with the institution represents a pharmacist of established character. Persons who contemplate following pharmacy as a profession can not do better than to enroll themselves with the coming autumn as students in the Louisville College of Pharmacy.

THE NEW ORLEANS MEDICAL AND SURGICAL JOURNAL.—The publication of this the oldest medical journal in the Southwest will be resumed in July, 1873, under the editorial management of Prof. S. M. Bemiss, M. D. Besides being extensively known to the profession as a writer and teacher of medicine, Prof. Bemiss is also connected with one of the largest and best-managed hospitals in the country, and is associated with colleagues who are active, experienced, and ambitious. With these excellent advantages the New Orleans Journal can not fail at once to take rank with the more substantial of our medical periodicals. It is to be published on the first day of every alternate month, and each number will contain one hundred and fifty pages of reading-matter. Subscription-price, five dollars. Contributions should be addressed to S. M. Bemiss, M. D., glass-box 2188; and letters on business to James A. Graham, 92 Camp Street, New Orleans.

WINDFALLS FOR DOCTORS.—We are told in "The Romance of Medicine" that the curiosities of medical life and practice are endless. "If we hear very often of medical men doing arduous work for very scanty remuneration, sometimes there is an agreeable obverse of receiving very splendid remuneration for very scanty services. We know of a medical man whose duty it is to take lunch every day at a great castle belonging to a noble lord. The household is immense, and there is just the chance that there may be some case of indisposition demanding attention. He gets some of the best company and best lunches in England, and duly charges a guinea for each attendance. There is a very wealthy man near a great city who can not bear to be left for the night. There is a physician of great ability who drives out of town nightly to sleep at his residence. He is consequently debarred evening society, and if he goes out to dinner he has to leave his friends before wine. He has to charge his patient a thousand a year, and I think he works hard for his money. Sometimes the services are such that money can not repay them. A friend of mine, a young medicus, had a standing engagement of four hundred a year to look after the health of an old lady. She required to be inspected three times a day, and made an exhibition of tongue and pulse. What made matters so aggravating was that she was as strong as a horse, while the doctor was a delicate man. She was so selfish and perverse that he was obliged to tell her that he would have nothing to do with her case. Similarly, I know the son of a rich man who proposed to pay a clergyman several hundred pounds a year for leave to spend his evenings with him. The parson, however, was obliged to tell his rich friend that he talked such intolerable twaddle that he could not accept his company on any terms that could be named. But the oddest of these arrangements is the following: A medical man has been attending a patient several years, and yet he has never seen his patient. The gentleman firmly believes that he has an esophagus of peculiar construction, and that he is accordingly liable at any moment to be choked. That help may be at hand whenever any sudden emergency may occur, he has a physician in the house night and day. The physician, being human, must needs take his walks abroad, and it becomes necessary to provide a substitute for him two hours a day. Accordingly a doctor attends daily from twelve to two, fills up his time by disposing of an admirable lunch, and finds the gold and silver coin, in their usual happy combination, neatly put by the side of his plate, in tissue-paper. Up to the present date he has never had the pleasure of exchanging words with his interesting patient."

ANÆSTHESIA.—The question of to whom belongs the honor of having first applied anæsthetics to surgical practice is being again agitated. Dr. Marion Sims, Prof. Doremus, Prof. Frank Hamilton, and other celebrities have recently lectured on the subject in Steinway Hall, New York, and all were agreed that the credit of the discovery of anæsthesia as a means of abolishing pain in surgical operations clearly belongs to Dr. Horace Wells. The American Medical Association gave an almost unanimous decision to the same effect in 1870. A select committee was appointed by the United States Senate in 1859 to examine this question; and the Hon. Truman Smith, senator from Connecticut, himself a member of the committee, prepared a voluminous report containing all the facts in the case which it was possible at that time to collect. A cloud of witnesses was examined, numerous affidavits were obtained, and the evidence carefully and impartially weighed by the senators. Their verdict gave the honor of the discovery to Dr. Wells. It does not appear that any new evidence has since been brought to light. As the report of that committee is not likely to be in the hands of many of our readers, and as it embraces perhaps more facts bearing on the subject than can be found elsewhere, we have ventured to give below an abstract of a review of the work, which was written by Dr. J. J. Speed, of this city, for the Louisville Semi-monthly Medical News, and published in the issue of that periodical for July, 1859.

"That many substances have been long known to possess the power to some extent of modifying the sensibility of the animal organization, enabling it to bear with some composure the frightful pain of amputation and childbirth, as well as the more deliberate torture of rheumatism and toothache, every body understands; but the discovery of an agent which could utterly overwhelm the sensational life, and hold in safety the essential vitality, was reserved for a very late period, and for an earnest, thinking, loving devotee to science and to truth.

"We propose very briefly to look at the claims of Dr. Wells, of Connecticut, to the high praise of first applying an anæsthetic agent to the purposes for which chloroform is now so generally used.

"The mere intellectual conception of the probable existence of such a power is not enough to secure the attention and gratitude of mankind; the fact must be demonstrated, and a sufficient number of persons must know of the demonstration. Upon both these points the book before us is filled to repletion with proofs. To us, possessed as we are of half a dozen agents producing very nearly the same results, it is a matter of no importance which particular one was first used as an anæsthetic—sulphuric ether, nitrous oxide gas, chloric ether, and chloroform are all now known to be available to this end. The nitrous oxide gas is the agent which arrested the attention of Dr. Wells.

"It seems that in December, 1844, a Mr. Cotton delivered, in the city of Hartford, Conn., a course of lectures, during which course he administered to various persons the nitrous oxide gas—or, as it is called, the laughing-gas — one of these persons having injured himself during the exhibition, and while under the influence of the gas 'afterward remarked that he *was not conscious of the injury*, and did not *know* that he had *suffered an injury*.' This was clue enough for the ingenious and philosophic Wells. If this man suffered real injury and felt no pain, why not pull his tooth or amputate his leg without pain under the same influence? Why not, surely? But whose tooth, doctor? Having full faith and a bad tooth, Dr. Wells is himself the first patient the world ever saw under the full influence of a power destined steadily and quietly for all after-time to rob physical pain of half its horror. On the 11th of December, 1844, the first tooth was drawn without pain under the reign of anæsthesia.

"One single satisfactory experiment was enough to encourage the eager prosecution of this new idea; and day after day and month after month did Dr. Wells, assisted by his friend, Dr. Riggs, perform all their painful dental operations by the aid of the nitrous oxide gas. Certificates are numberless as to the safety and completeness of the anæsthesia during 1845–6. It has been suggested more than once that since the glory of the discovery has settled upon others, the presumption is fair that Dr. Wells, though the earliest who thought out the idea, did not readily put it into practice in such sense as to *establish* its truth. The book under notice gives us the sworn depositions of Drs. Riggs, Marcy, Ellsworth, Perry, Braddock, Crofoot, Dodge, and many others, professional associates and neighbors of Wells, all confirming the fact of its use and its safety during a period of two years. To the testimony of these professional men add the names of Goodrich, Burleigh, J. G. Wells, Lee, Haverss, Martin, Slocum, Goodwin, Richardson, Whiting, and Williams, patients, and enough others to fill several pages of this journal; and how is it possible to regard the discovery as a mere conception, unrealized? If testimony can prove any thing, it was more than a conception—it was a true birth, and lived and wrought wonders till in the course of time (naturally enough) another member of the same family came to take its place and perform the same wonders upon a large sphere and with greater readiness and greater safety. In our admiration, however, of the youngest-born and most popular we should not overlook the fact, important to truth, that Dr. Wells was the very father of the first-born.

"The case of Henry A. Goodale, operated on by Dr. P. W. Ellsworth—amputation of the thigh. 'It was a bad case, and well calculated to test the power of the gas. The operation was entirely successful, and fully equal to any similar operation under the influence of sulphuric ether or chloroform.'

"The case of Mrs. Gabriel — removal of a tumor from the shoulder, by Dr. S. B. Berresford, the operation lasting five or six minutes, and weighing six or seven ounces. 'Quite as successful as any operation so far as destroying sensibility was concerned.'

"The removal of a large scirrhous testicle by Dr. E. E. Marcy, who states by deposition his entire satisfaction with the effects of the gas. These various and painful operations, witnessed by many different persons, professional and lay, are surely sufficient to rebut the pretensions that Dr. Wells did nothing more than conceive the idea of the probable existence of an agent which would so far subdue the sensibility as to permit any of the operations of surgery or dentistry without pain.

"The deposition of one so distinguished as Dr. Valentine Mott, of New York, must have due weight with the profession. He unhesitatingly and fully accords to Dr. Wells 'the credit and honor of the discovery.' Surgeon J. B. Porter, of the United States army, says of anæsthesia, 'I have always believed it to be due to Dr. Horace Wells.'

"Drs. Mignault, Curtis, and Ball, of Boston, witnessed operations under its effects as administered by Dr. Wells, and so state over their proper signatures; and Dr. C. H. Heywood, formerly House Surgeon of the Massachusetts General Hospital, writes 'that to the spirit of Horace Wells belongs the honor of having given to suffering humanity the greatest boon it ever received from science.'

'A careful perusal of the entire work of Hon. Truman Smith has left no doubt on our mind as to the origin of that great idea which has resulted, through the labors of Prof. Simpson, in the inauguration of that almost omnipotent princess, anæsthesia, before whose sway we all bow with thanks and gratitude for so gentle and so beneficent a control.'

"We conclude by stating a few points which are perfectly susceptible of proof, and have been to our mind abundantly proven. That in December, 1844, Mr. Cotton delivered a series of lectures in the city of Hartford upon Chemistry and Natural Philosophy; that on the 10th of that month one of his audience, while under the influence of nitrous oxide gas, received physical injuries of which he seemed to be unconscious, and *afterward stated* that of the *injuries he was unconscious;* that on the succeeding day, the 11th of December, 1844, Dr. Horace Wells had himself placed under the same influence, and had a tooth drawn without evincing pain, and afterward stated that he was unconscious of pain; that from this day forward he continued for two years to use the nitrous oxide upon all such as were willing to submit to it; that his associates in dentistry adopted to a greater or less extent the same agent; that Henry A. Goodale suffered amputation of the thigh at the hands of Dr. Ellsworth; that Mrs. Nancy Gabriel suffered the removal of a tumor weighing six or seven ounces at the hands of Dr. Berresford; that Dr. Marcy removed a scirrhous testicle from a youth while under the anæsthetic influence—all without pain, and all during 1844–47. Add to this the testimony of Dr. Mutter, of Philadelphia; Prof. Abner Jackson, of Trinity College, Connecticut, and Prof. Willard Parker, of New York, confirmatory of the general views here presented, and we are utterly at a loss to see how the name of Horace Wells can fail to be associated with that glory which the world is always ready to accord to the benefactors of humanity."

THE USE OF SICKNESS.—"My old nurse, Mrs. Patrick O'Toole, was a woman of logical mind. I was very sick once, and the doctor left me an atrociously bitter drug, which I rather declined taking. But Mrs. O'Toole carried the day. 'It 's the doctor's orders,' cried the good lady; 'and if you do n't go by the doctor's orders it aint no use for you to be sick at all.' I swallowed the doctor's scruples as well as my own."

CHOLERA.—This disease has broken out in many parts of our country, and without the usual warning. Heretofore when it has prevailed notice was given of its approach. We have heard of it in all its previous visits as spreading out of India into Russïa, then pursuing its march across Europe until it reached France and England, and thence from some of their ports being brought to our shores. This is the history that has been given of all the outbreaks of the disease on our continent up to this time; but now it seems to have broken out in one of our own cities before invading Western Europe. About two months ago cases of what bore a strong resemblance to malignant cholera, in symptom and termination, were reported in New Orleans. A steamer leaving that city for Cincinnati lost a number of deck-hands or passengers on its way. Not long after it was announced in New Orleans cases of the disease made their appearance at Memphis, and at points on the river below. There was a difference in opinion among physicians as to the character of the malady, but all agreed that it terminated fatally in a few hours when suffered to run on unchecked, and that its subjects died in collapse, having had rice-water discharges and cramps.

The latest accounts from Memphis show that the disease is abating there, but after a month the mortality still exceeded ten a day. Nashville has suffered severely in all former visitations of cholera, and the pestilence in the last few weeks has shown a malignity in that city not exhibited up to this time at any other point in the country. On June 20th seventy-three deaths were reported there from cholera, and the mortality ranged from forty to seventy during the week from the 15th to the 22d. The disease has also appeared at Gallatin, Hartsville, Lebanon, and Murfreesboro, in Tennessee, and at Paducah, Indianapolis, and Cincinnati; but in none of these places has it assumed an epidemic form. After Nashville, Gallatin, on the railroad twenty-six miles from that city, has been most seriously afflicted.

There has been a singular unwillingness among physicians to admit that the disease was cholera wherever it has appeared. The cases were first referred to cholera morbus, and set down to some indiscretion in diet. A few cases have occurred in Louisville, but a general skepticism prevails in the profession as to their having been cases of genuine cholera. We believe that it is true Asiatic or malignant cholera which is now spreading over the country, and which has been so fatal in a few places. We have no doubt that three or four sporadic cases have originated in Louisville; but a peculiarity of the disease exhibited at most points is that it shows no disposition to become epidemic. No new cases have followed those which more than a fortnight ago terminated in death, after a few hours' illness, in this city.

In Nashville some very noteworthy facts have been brought out by the present epidemic. The disease has been limited to a few localities, and a very large proportion of the victims have been negroes. On one day forty-nine out of seventy-three were colored, and on another forty-eight out of fifty-nine. When the mortality exceeded seventy a day the city proper was comparatively healthy; hardly any citizens had the disease. The infected localities are creek-bottoms, subject to overflow, where the thriftless inhabitants live in crowded, badly-ventilated huts, and drink water from feeble springs or wells excavated in the limestone rock. In Memphis and in Gallatin too the mortality among the colored population has been quite out of proportion to that of the whites.

Physicians, wherever the disease has yet appeared, concur in the statement that it is entirely manageable if cases receive timely treatment. Negroes rarely apply for medical aid before cramps have supervened, when collapse is impending and the condition of things nearly hopeless. At the penitentiary in Nashville ninety of the convicts were reported ill at one time, most of them with cholera, but all in a promising condition.

When cholera is prevailing every case of diarrhea should be treated as the premonitory symptom of the disease. An opiate will generally check it; but if the case is not of the mildest character, we should not be content with simply arresting the evacuations; we should not rest satisfied until we had brought about discharges of another kind by calomel. The indications of cure appear to us to be to check the watery discharges, keep up the vital powers of the patient, and secure dark, consistent evacuations.

The Atlantic cable brings accounts of cholera in some of the cities of Germany, and there is reason to apprehend that it will become epidemic in Europe during the warm season. Having originated on our continent, we may infer that it has at last become naturalized, and in future may look for it to break out from time to time, as it has done in New Orleans after an incubation of seven years. Its progress during the hot months immediately before us will be watched with intense interest.

TREATMENT OF CHOLERA.—Dr. Melvin Rhorer, of this city, whose letters to the American Practitioner from Vienna will be remembered by our readers, has prepared the following as representing what is known as the "Vienna treatment" of cholera:

"During cholera times an ordinary diarrhea should be treated with great care. The following prescription I saw used with excellent effect:

"℞. Decot. salep., ten grains to water, ℥ ij;
Laud. liquidi Sydenhami, . . gtt. xx;
Aq. naphth., ... }
Syr. diacodii, ... } āā ℥ ss.
M. Sig. Table-spoonful every two hours.

"If the diarrhea continues notwithstanding the use of the medicine, give starch clysters—two drachms to half an ounce of starch to one pound of fluid, with ten or fifteen drops tinc. opii — two or three times daily. Strict attention should be paid to diet. Nothing but beef or gruel-soup should be allowed; absolute rest; warm applications to abdomen. This is absolutely necessary. In addition to this the treatment may be aided by strong aromatic teas; mucilaginous drinks made of salep or althæa; rice-water with syrup for slaking thirst. If after this treatment the disease continues we must have recourse to astringents; say

"℞. Argent. nit., ... gr. j;
Laud. pur., ... gtt. vj;
Acidi tannici, ... ʒ ss;
Mucil., ... q. s.
M. ft. pil. No. xxx. Sig. One pill every hour.

"The suppression of diarrhea in cholera is the thing most desired. Twenty or thirty drops of tinct. opii in six ounces decoc. salep is most active in securing this end, particularly in combination with the clyster. When complicated with vomiting give

"℞. Ext. nux vomic. æther, . . gr. iij;
Tinct. opii, ... gtt. xx;
Aq. naphth., ... ʒ ij.
M. Sig. Give ten drops every half hour together with small lumps of ice.

"In the event that this should not be sufficient to secure the desired result, opium with calomel or bismuth often act like a charm. Hypodermic injections of morphia into the linea alba are sometimes indicated in this stage of the disease. Thirst is best overcome by ice-water, pounded ice, Seltzer water, etc., given in small quantities and often repeated. For the cramps friction with flannel, inunction of ext. belladonna, extract opii, and oil of hyoscyamus. Hypodermic injections of morphia in calf of each leg. For the hiccough apply in succession the following: sinapisms, bladders of ice over the region of the stomach, one twentieth grain of sulph. strych. every two hours, a few drops of chloroform in water or acetic ether on sugar, black coffee, etc. When we have great depression of the mental powers apply ice fomentations over the region of the heart. Where we have from the very beginning excessive vomiting, pulse imperceptible, coldness of the entire body, and cyanosis, an energetic stimulant is demanded; such as musk, gr. iv, or sulph. ether, ʒij; oil of peppermint, gtt. iij.

"In cases of syncope, and for the purpose of bringing about reaction, strong or weak stimulants are indicated, as the case may demand. To the class of remedies here applicable belong camphor, musk, acetic ether, cocoa (the first two named to be used hypodermically); Russian tea and Malaga or Madeira wine may be given to sustain strength. The greatest care should be taken to prevent the return of the diarrhea. We should also be careful to prevent the recurrence of any other depressing symptom. If reaction is not accompanied with any thing more serious than ordinary desquamation of epithelium, astringent drinks, such as lemonade, etc., may be given. Where the urine is secreted in small quantities mild diuretics should be given, such as lemon-juice, tinct. digitalis, drinks of Seltzer and soda-water. If the secretions of the mucous membranes are scanty after reaction is present, the urinary secretions are to be facilitated with care. The application of warm fomentations, frictions with oil juniper, ungt. digitalis, Venice turpentine, or tincture cantharides over the region of the kidneys are sometimes sufficient to meet the indications. The same may be effected by means of injection of one drachm turpentine with yelk of egg and a pint of water. During convalescence supporting remedies are called for. In dyspeptic complications nux vomica, rhubarb, and magnesia stand at the head of the list."

A Case of Imperforate Anus.—Dr. F. B. Morris, of Millville, Ohio, sends the following:

"A girl, seven and a half years old, otherwise healthy, presented an anus closed with skin and fascia about four lines in thickness. A fistulous opening about three lines in diameter, beginning in the rectum above the sphincter ani and ending at a point between the fourchette and fossa navicularis, was the only outlet for the fecal matter which continually dribbled away, a source of constant annoyance. In May, the child being chloroformed, I passed a grooved director through the fistula into the bowel, and divided the entire tract. I then trimmed the flaps into a somewhat circular shape, cleared out the bowels with my finger and the scoop, pulled the gut down, and carefully attached it by sutures to the raw surfaces of the newly-made anus. In five days after the operation the parts had healed, leaving the patient with complete control over the sphincter, and making the act of defecation as natural as if there had been no deformity."

THE SOUTHWESTERN KENTUCKY MEDICAL ASSOCIATION.—This new but active organization, embracing in its membership a number of the most prominent physicians of the state, held its last meeting in Mayfield in May. Papers were read by Dr. Tauber on "Peri-uterine Cellulitis," Dr. E. B. Richardson on "The Calabar Bean and Atropia in certain Affections of the Eye," Dr. Dismukes on "Metastatic Abscess," and Dr. Thompson on "The Treatment of Syphilis." Besides these there were addresses by Dr. Singleton on "The Divine Philosophy of Medicine;" Dr. Thompson, the retiring president, on "The Mutual Obligations that exist between the Public and the Medical Profession;" Dr. Tauber on "Why should not Women practice Medicine." The officers for the ensuing year are:

President—John L. Dismukes, M. D., of Mayfield; *First Vice-president*—John Anderson, M. D.; *Second Vice-president*—R. T. Hocker, M. D.; *Recording Secretary*—J. W. Singleton, M. D.; *Corresponding Secretary*—B. Tauber, M. D., of Paducah; *Treasurer*—R. Saunders, M. D.; *Librarian*—E. G. Thomas, M. D.

The next regular meeting of the Association will be held in October in Paducah.

ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The fifth annual meeting of this association convened on Monday, the

5th of May, in the Polytechnic Building, St. Louis, at eight o'clock P. M.; Dr. Parvin, the president, in the chair, Dr. N. S. Davis acting as secretary. After the transaction of some business the president delivered the annual address, which has been already presented to our readers. An adjourned meeting was held the next evening at the Southern Hotel, when Dr. W. R. Bowling was elected president for the ensuing year. The subject for the prize of 1872, *Diseases of the Ovaries and their Treatment,* was continued for 1873. The subject for 1874 is in regard to climate in the treatment of pulmonary tuberculosis, in what stages of the disease should changes be made, and what should be the changes; and the committee of award is as follows: Dr. N. S. Davis, Dr. Logan, of Atlanta, and Dr. Toner, of Washington.

BOYLE COUNTY MEDICAL SOCIETY.—At the meeting of this society held in Danville, June 3, 1873, the following resolutions were unanimously passed:

"Whereas, Dr. William Downton, late a member of this society, has been removed from us by the hand of death; and whereas in view of the same it is becoming that some appropriate action should be taken by this society; be it

"Resolved, that in the death of Dr. Downton this society has lost a valued friend and counselor, who, although he had retired from the active duties of the profession he long practiced with honor to himself and to the satisfaction of his patrons, was ever ready by his voice, his example, and his means to aid any effort to advance the interests of the medical profession or its worthy members.

"Resolved, that in his death not only has our profession lost a worthy representative, but the community has lost a public-spirited and enterprising citizen, society a valued member and genial companion, and the church a tried friend and liberal supporter.

A. R. MCKEE, . . }
R. W. DUNLAP, . . } *Committee.*"
JOHN D. JACKSON, }

THE AMERICAN PRACTITIONER.

AUGUST, 1873.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

CASE OF RECONSTRUCTION OF THE MOUTH, AFTER LOSS OF THE UNDER LIP, BY A NEW OPERATION.*

BY GURDON BUCK, M. D.,

Visiting Surgeon of the New York Hospital and Presbyterian Hospital; Consulting Surgeon to St. Luke's Hospital and Roosevelt Hospital.

Hugh B., a resident of New York City, aged thirteen years, of rather slender constitution, though ordinarily enjoying good health, came under surgical treatment in October, 1869, in consequence of the loss of the entire under lip following an attack of scarlatina, of which his mother gave the following account.

When six years old he was taken sick with scarlet fever, and became dangerously ill. The eruption was scanty, and in other respects the disease was irregular in its development. Sloughing of the lip succeeded, and with it inflammation, involving the parts around the lower jaw on both sides.

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*Communicated at the annual meeting of the New York State Medical Society, February, 1873.

Necrosis followed, and considerable portions of the maxilla were cast off.

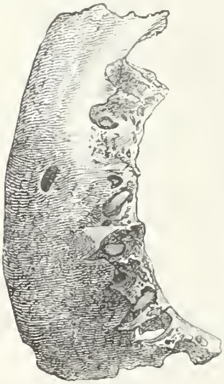

Fig. 1. Right half of the body of the lower jaw.

The condition of his face when I first saw him was as follows: The entire under lip was gone, and the skin below the lip on the right side of the chin had been destroyed to within a finger's breadth of the edge of the jaw. On the left side of the chin the destruction of the parts had not extended as low down. The upper lip was of ample dimensions, and both angles of the mouth were entire and somewhat drawn down by the contraction of the neighboring parts during cicatrization. The right half of the tongue adhered by its under surface to the floor of the mouth as far forward as the alveolar border of the maxilla in front. Its extremity also was held fast, and was exposed to view from the absence of the under lip. That portion of the body of the lower jaw which is situated between the symphysis and last molar tooth of the right side had previously come away entire, and the alveolar sockets of all the teeth belonging to it could be identified; the last molar tooth alone still remained *in situ* inside the mouth. A much smaller portion from the left half of the jaw also exfoliated. It consisted of alveolar border supporting the sockets of the two bicuspid and two neighboring molar teeth. The extensive loss of bone on the right side has been quite perfectly supplied by new bony product along the inferior border of the maxilla; thereby a solid support is afforded and the symmetrical form of the face preserved. The canine tooth is the only one remaining *in situ* in the left half of the lower jaw, and the last molar the only one in the right half. Articulation is but little affected. The

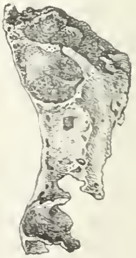

Fig. 2. Portion of alveolar border from the left half of the lower jaw.

patient suffers the greatest discomfort and annoyance by the constant flow of saliva from the mouth. Owing to the deficiency of teeth he has been restricted to the use of liquid and soft solid food. His general health is good.

First Operation.

The first operation was performed on the 6th of October, 1869, at the patient's residence, with the aid of Prof. A. C. Post and Drs. Bell and Beekman. Ether anæsthesia was employed in this as in all subsequent operations. The procedure was as follows: The right cheek was detached from the lower jaw, on the inside of the mouth, backward to a point a little beyond the edge of the masseter muscle, and downward to the lower edge of the jaw-bone. An incision, commencing upon the right cheek at a point below the middle of the zygoma, was carried downward and forward in a curved direction, with its convexity looking posteriorly to a point half an inch below the angle of the mouth. After turning up the flap thus formed and exposing the cavity of the mouth, I divided the mucous membrane along the anterior edge of the masseter muscle upward to the malar process, and thence forward along the line where it quits the maxilla to cover the inside of the cheek as far as the upper canine tooth. This liberation of the parts permitted the entire flap to be glided forward edgewise till its anterior edge reached the symphysis. The same procedure

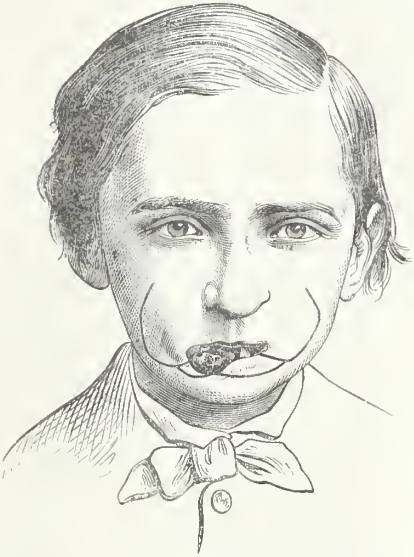

Fig. 3. Patient's condition before any operation was performed. The under lip is entirely gone and the end of the tongue exposed to view.

was executed on the left side of the face. The arteries were secured as fast as they were encountered, thus avoiding hemorrhage as much as possible. The skin remaining upon the chin was pared symmetrically into an angular form, the angle pointing upward and situated in the median line. The two cheek-flaps were now glided forward edgewise and made to meet by their anterior edges at the symphysis, where they were secured together by two pin-sutures below and three fine thread-sutures at the lip-border. On either side of this line of junction, where the cheek-flaps came together in the median line, their inferior edges stood astride of the angle of integument upon the chin, and were secured to it by sutures. This adjustment had the effect of folding the upper lip upon itself and obliterating the angles of the mouth, besides causing the folded upper lip to overhang the retracted under lip. The surfaces left bare on both cheeks by this transfer of the cheek-flaps were covered by advancing the skin from the posterior edge of the wound after dissecting it up from its subjacent connections. No raw surface therefore remained after securing these edges together by sutures. Notwithstanding the extensive incisions required in this operation, the hemorrhage was moderate, and was not followed by any marked depression of the pulse. A single attack of vomiting, which emptied the stomach of the blood swallowed during the operation, was the only disturbance occasioned by the long-continued administration of the ether. To maintain the warmth of the parts they were protected with a covering of woven lint. The inflammatory tumefaction that followed during the three or four days succeeding the operation was moderate, as was also the febrile reaction. On the second day I began removing the alternate thread-sutures and changing the yarn on the pins. Special care was required to maintain in close contact the edges of the flaps, where they met together over the symphysis menti and along on both sides of the chin, where the saliva was liable to escape between the sutures. On the right side of the chin, where the tongue was in contact with the parts on the inside of the mouth, and exerted some forward pressure, saliva did escape between the sutures and prevented adhesion from taking place. At all other points primary union was secured. To accomplish it, however, fresh pins as well as fresh sutures had to be inserted at those points where the old ones were beginning to excite suppuration by their prolonged presence. The administration of nourishment was managed by his mother, whose long experience enabled her to do it very successfully. On the right side of the chin, union having failed to take place for a distance of about two inches from the symphysis, it became necessary to resort to another operation for the closure of the aperture.

SECOND OPERATION.

October 30th—Both edges of the opening remaining on the right side of the chin having cicatrized, they were pared afresh. The lower edge was dissected up from the jaw to facilitate its eversion, and the upper edge was cut across at both ends for the same purpose. The two edges were then accurately confronted and secured together by six pin-sutures and nine intermediate silver wire sutures. By this means the wound was made impermeable to saliva.

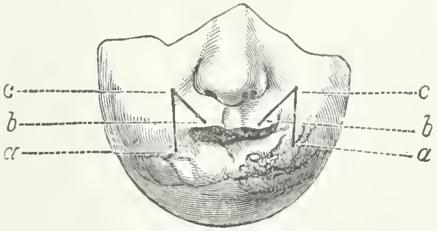

FIG. 4. The new mouth; upper lip, folded upon itself, protruding and overhanging the short, retracted under lip.

November 4th—The last suture was removed to-day, and union found to have taken place at all points except one, where an opening of the size of a goose-quill allowed the saliva still to escape.

November 15th—Under repeated applications of nitrate of silver, and the constant support afforded by adhesive plaster, the opening has now permanently healed.

The mouth as now reconstructed presents a somewhat circular form; the upper lip being folded upon itself, increased in thickness, and overhanging the under lip, which is retracted and tense. To restore the angular shape of the mouth and equalize the length of the two lips was the object to be accomplished by the following operation, which was performed on the 30th of November.

THIRD OPERATION.*

The method of performing this operation is new and differs essentially from any hitherto described in the annals of operative surgery. To secure the utmost precision in making the requisite incisions, their course was first designated by pins temporarily inserted erect in the skin. For example, on either side of the chin a pin was inserted at a finger's breadth below and to the outside of the mouth, and located so that both should be equidistant from the median line and on the same horizontal level (*a a*, fig. 4.) A pin was also inserted at the margin of the vermilion border of the upper lip on either side, so that both pins should be equidistant from the median line, and at such a distance apart as would leave between the two pins sufficient length of lip-border to form a new upper lip (*b b*). By aid of the fore-finger of the left hand, placed on the inside of the mouth, the left cheek was kept moderately on the stretch, while with a sharp-pointed Beer's cornea-knife it was transfixed at the point *a*, marked by the lower pin on the left side of the chin. The incision was carried through the cheek upward and a little outward, a distance of one inch and a half, to a point near the middle of the cheek (*c*). The left half of the upper lip was then transfixed at the point *b*, marked by a pin on the vermilion border, and an incision carried through the lip and cheek outward and a little upward to join the first incision at its terminus (*c*) in the middle of the cheek. A triangular patch was thus formed, which included the entire thickness of the cheek, having its apex free and disconnected, while its base remained attached on the side toward the mouth. The next step was to transfer this patch from the cheek to the side of the chin. For this purpose an incision was made on the side of the chin from the starting-point (*a*) of the first incision downward to the edge of the jaw and to the depth of the periosteum. The edges of this incision, yawning wide apart, afforded a V-shaped space for the lodgment of the triangular patch, which was then brought round edgewise and adjusted by sutures in its new locality. By this transfer the portion of upper-lip border which formed a part of the base of the patch was brought into a transverse line continuous with the under lip, and constituting an extension of it. The space upon the cheek from which the triangular patch had been taken was then closed, by bringing its edges together and securing them in contact by sutures. By this adjustment of the parts a new angle was formed for the left side of the mouth at the point *b* on its vermilion border, where the upper lip had been transfixed. The left half of the mouth thus reconstructed presented a natural shape, and consisted of natural lip-border with lining mucous membrane.

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* Dr. J. A. Estlander, Professor in Helsingford (in Langenbeck's Archives, 14 Band, 3 Heft, 1872), has reported an operation for supplying loss of the lip somewhat similar to the author's.

Fourth Operation.

On the 4th of January, 1870, the same operation was applied to the right side of the mouth. Some fear was entertained that sloughing might take place on this side of the face, from the presence of numerous cicatricial lines resulting from previous operations. Nevertheless primary union followed the operation as it did the preceding, except at the apex of the triangular patch in its new locality on the right side of the chin, where a slough formed, and was in due time cast off. The extent of the slough was, however, so limited as not at all to impair the result of the operation. At the end of the third day the last suture was removed, and strips of adhesive plaster were applied to support the newly-united parts. The final result obtained by these two operations was the restoration of the mouth to its natural shape, except at one point in the right half of the under-lip border, where a notch still existed and permitted the saliva to escape uncontrolled from the mouth. This defect in the result of the last operation was owing partly to an original deficiency of material on the right side of the chin, and partly to the right half of the under-lip border having dropped below the level of the left half in uniting with it in the median line. The patient spent the following summer in the country, and returned to the city in October much improved in health. The parts involved in the previous operations had also improved; they, as well as the cicatricial lines intersecting them, had regained a good degree of softness and pliability.

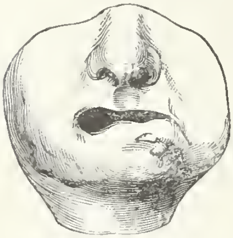
FIG. 5. Condition at this time.

FIFTH OPERATION.

October 5, 1870—The design of this operation was to fill up the notch on the under-lip border. It was executed as follows: The border of the notch was split lengthwise vertically through its middle, and the edges on both sides of the split were pared off beveling, so as to increase the thickness of the fresh-cut surface. The upper lip was then transfixed at the middle of its right half, and an incision carried toward and around the right angle of the mouth, so as to detach a strip of lip-border half an inch wide, including the angle with which to fill up the notch. The strip was brought around lengthwise and secured to the fresh-cut edge of the notch by fine thread-sutures inserted close together. This operation diminished materially the defect in the right half of the under lip, but did not entirely prevent the escape of saliva. At the same time, however, the operation had diminished the dimensions of the mouth, and converted the angle on the right side of the mouth to a circular turn. These defects rendered further operative procedures necessary.

SIXTH OPERATION.

April 12, 1871—The object of this operation was the restoration of the angular shape of the mouth on the right side. It was accomplished by carrying an incision very accurately along the line separating the vermilion border from the skin around the circular half of the mouth, and extending to an equal distance on the upper and lower lips. The incision penetrated to the depth of the mucous membrane on the inside of the lip, but did not divide it. A sharp-pointed, double-edged knife was then inserted between the skin and mucous membrane at the middle of the incision, and, being directed flatwise toward the cheek, was made to separate them from each other in the direction in which the mouth was to be enlarged. The detached skin was thus first divided with strong scissors on a line with the commissure of the mouth and to a distance of three quarters of an inch. The underlying mucous membrane was next divided in the same direction, but not as far out as the skin. The skin and mucous membrane were then secured together by a single thread suture passed through them at the angles of the incisions just made. A new lip-border was then shaped above and below by paring the edges first of the skin, then of the mucous membrane, in such a manner that the latter would overlap the former after they had been secured together by fine thread-sutures inserted at short intervals. A good result followed, and the natural angular shape of the mouth was restored.

Again the patient spent the summer in the country, and on his return to the city, in September, a further improvement in the condition of his face was observable. Still, however, the mouth, though restored to its natural angular shape on the right side, was scanty in length. A shallow notch in the right half of the under-lip border also still remained, and allowed some escape of saliva, especially when the head was inclined forward and his attention was not directed to controlling it. After a little persuasion, seconded by his mother's influence, the patient consented to a final operation for the remedying of the defects still remaining. It was performed on the 23d of September, 1871, as follows.

SEVENTH OPERATION.

The first step of the operation was to enlarge the mouth on the right side by extending the angle further outward. This was accomplished by repeating the sixth operation as just described. The next step was to obliterate the notch on the right half of the under-lip border. To accomplish this the following operation was performed: Two incisions, commencing on either side of the notch a little below the lip-border, and extending through the entire thickness of the lip, were carried downward in converging lines that met below the chin. The included triangular patch, having for its base the notched portion of the lip-border, and retaining its connection for support on both sides of the notch, was pushed upward, and secured on a higher level by bringing together the edges of the wound below the patch, and securing them in contact by a pin-suture wound with cotton-

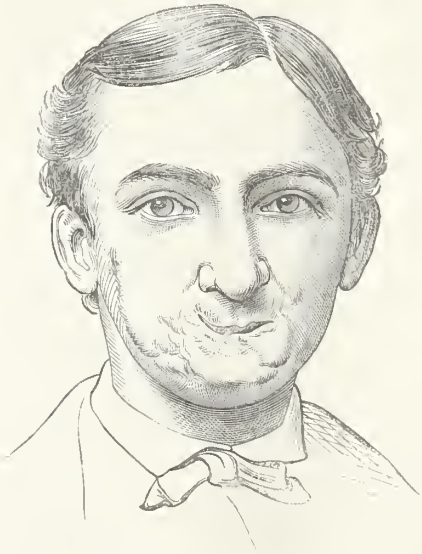

FIG. 6. Condition in March, 1872.

yarn. A second pin-suture was inserted higher up and made to traverse both edges of the wound, as well as the patch interposed between them; an additional thread-suture below completed the adjustment. Primary union without any suppuration followed, and on the third day the last suture was removed.

The final result of these operations is that the patient's mouth is of natural shape, symmetrical, and of good dimensions. The saliva no longer escapes uncontrolled. The lips perform their natural motions, and articulation is not at all affected. Fig. 6, representing his condition in March, 1872, was engraved from a photograph. At the present time—March, 1873—still further improvement is noticeable. The numerous cicatricial lines, intersecting the surface on both sides of the chin and cheeks, have shrunken to the level of the adjacent surface, and they, as well as the skin itself, are perfectly supple and pliable.

NEW YORK.

ON CHOLERA AND CHOLERA INFANTUM.

BY EDWARD R. PALMER, M. D.,

Professor of Physiology in the University of Louisville.

Two cases of malignant cholera have lately come under my observation in this city. The first occurred on the 2d and the second on the 3d of July. They were attended by Dr. Manly and myself. Prof. Bell saw the second case in consultation with us.

The subject of the first case was a young lady, aged twenty-eight years. She was taken during the night of July 1st with vomiting and purging. She was seen by Dr. Manly at daylight, July 2d, when the vomiting and purging had ceased. Collapse had taken place. No pulse was perceptible beyond an occasional quiver of the carotids; restlessness a prominent symptom, with death at eight A. M. I saw the case between six and seven A. M.

The second patient was the father of the young lady, and had nursed her throughout her last illness. After her death he went out in town, exposed to the great heat of the midday sun, to make arrangements for the funeral. At two o'clock I was sent for, and found him lying down, breathing rapidly, somewhat hoarse, with a rapid, feeble pulse, and anxious expression of countenance. He had just returned from the privy, and had discovered his exhaustion in climbing the stairs to his room. I ordered at once the "chloroform paregoric" which is recommended by Dr. Hartshorne in his "Essentials;" also sent for Dr. Manly. It is needless to follow the case either as regards the treatment on the one hand or the march to dissolution on the other. He died the next day at about one o'clock P. M.

My object in writing this brief article is not to add to the already long history of ineffectual struggles which the profession is too often called upon to make against this rapidly fatal malady; but I have some observations, or more properly some reflections, which I wish to submit to my professional brethren.

Cholera, I am convinced, is no more identical with cholera morbus, nor any more due to a like cause, than is small-pox with pneumonia. The one is clearly due to a specific poison inhaled, the other to the action of non-specific causes. Their prevalence at the same time is simply a coincidence, nothing more. Purging and vomiting constitute the disease in cholera morbus, and when this disease proves fatal it is due to exhaustion from these actions. Purging and vomiting, though usually present, may be entirely absent, and are, relatively speaking, minor symptoms in true cholera.

Suppression of urine, so often spoken of in connection with cholera, may occur or may not, though the former is almost invariably the case. When it does it is not, strictly speaking, the cause of death, but is one of the effects of the specific cause which is crippling other and quite as important functions. Nor is inspissation of the blood entitled to the prominence it holds among the causes of death. The blood certainly fails to circulate, and that usually to a great extent some hours before death.

Cholera appears to be in its essence the result of some unknown specific poison acting upon the ganglionic system of nerves. It is a "ganglionic tetanus," and whenever *cured* it must be by such agents as will relax this spasm of the vaso-motor and other ganglionic nerves. The purging, the vomiting, the inspissation of the blood, the urinary suppression, these will all, if present, demand attention; but the cholera, which kills without any of these phenomena, may also carry off the patient after the relief of these symptoms. I can not better explain what I mean than by comparing my second case with one of cholera morbus which I had under treatment at the same time.

The cholera case looked malignant from the start. The countenance was changed to an anxious expression; was pinched and blue; the whole surface was blue and shriveled; the pulse speedily became thready, and in ten or twelve hours was lost; the extremities became cold about the same time; the voice was first husky, and then was lost in a few hours. During the first twelve hours urine was voided regularly; after that not at all. Purging and vomiting were tolerably frequent during the first twelve hours, but ceased, as we believed, under the effect of treatment at the end of that time, after which whisky, brandy, egg-nog, milk, and water were taken and retained. The cerebro-spinal system did not appear to take any part in the affection. Death from collapse resulted in twenty-four hours after the attack. The case throughout reminded me more of one of fatal poisoning than any thing else.

The cholera-morbus case began at ten P. M. of July 2d, the same day and in the same neighborhood as the case of cholera. I saw the patient, an adult man, at eleven P. M. It was a fearful case, the vomiting and purging far exceeding that of the cholera case. Abdominal and crural cramps were well marked; skin cool, but not cold; pulse all the way through full, though latterly feeble. These symptoms, with slight improvement, lasted nearly twenty-four hours, when they gave place to a good sleep, and the case was ended. It was attended by no collapse, no cessation of pulse, no loss of voice, no shriveling, no *iciness* of the extremities, and none of that ugly blueness which marks cholera. So different was this and every other case of cholera morbus (some twenty or thirty in number) which I have seen this summer from the cholera cases, that I felt no hesitation, even when the vomiting, purging, and cramping were almost incessant, in promising a certain recovery. As for cholera, as I have already said, it is not the purging, vomiting, etc., but the *ganglionic tetanus* that kills.

CHOLERA INFANTUM.

Previous numbers of the practitioner have contained articles highly commendatory of the calomel and of the bismuth and pepsin treatment of cholera infantum. I have tried both, and am fully convinced of their inferiority in this disease to the creosote and lead treatment. In the treatment of a large number of cases during the last three summers but one has proved fatal, and that one was in a state of complete collapse before it was seen. The formula used is as follows:

℞.	Mucilaginis acaciæ, . . .	℥ ss;
	Liquoris calcis, . . .	℥ iss;
	Creosoti, ...	gtt. iij;
	Plumbi acetatis, ...	gr. xvj.

S. A tea-spoonful every one to three hours.

One thing proved is the innocuousness of the acetate, no symptom of lead-poisoning having in any instance resulted.

A former professor of chemistry in this city was in the habit of asserting that sugar of lead might be given in scruple or half-drachm doses without any toxic effect, which seems, though contrary to general opinion, exceedingly plausible.

Egg-water—the white of one egg to each gobletful—is given in conjunction with the above treatment. By adding a good-sized pinch of bicarbonate of soda to each glassful the retention of this drink by the stomach is almost assured.

Finally, in the above reference is had to those cases only which are strictly cholera infantum, entero-colitis being excluded as a disease which during its protracted course usually needs a variety of treatment. Here too, however, creosote and lead will give great satisfaction. My object in this note is not the promulgation of a *new* treatment; but, if possible, to strengthen a good old one, and claim again for the use of sugar of lead freedom from the danger of lead-poisoning.

LOUISVILLE.

UTERINE HYDATIDS—FATAL TERMINATION.

BY J. OWEN WALL, M. D.

On the 30th of January I was called to visit Mrs. S., in consequence of her suffering with profuse uterine hemorrhage. The lady was forty-three years of age, had borne eleven children, the youngest being two years old. She had slight uterine pain. The body of the uterus was as large as at the fifth or sixth month of pregnancy. By local applications and position, and by morphia internally, the pains and flow were promptly arrested. The next day she was in comfortable condition, though she had slight hemorrhage during the previous night. As her general health was poor, tonics, etc., were prescribed. Soon after nausea and vomiting occurred, and neither food nor medicine could be retained, but these were slightly relieved by a blister to the epigastrium dressed with morphia. Her history until March 3d was marked by a persistence of the irritability of the stomach, by occasional attacks of hemorrhage, and by a rapid increase in the size of the abdomen. At that date most severe hemorrhage took place, apparently in consequence of her getting out of bed and walking to the fire. The flow was so great as to cause syncope. Emptying the vagina of clotted blood, I found the os uteri slightly dilated, and a soft mass protruding from it, which upon removal was found to be composed of vesicles varying in size from that of a filbert to that of a small gooseberry. Of course the diagnosis was plain, and I determined to empty the uterus. A large dose of fluid extract of ergot was followed by vigorous uterine contractions, but the hemorrhage was so great that a tampon was used for its arrest. The next day I found her restless, skin parched, pulse 140, and very feeble. The tampon was removed. There had been no dilatation, and there was no hemorrhage. Ordered beef-tea, wine-whey, etc., hoping she would rally before further interference was necessary.

On March 5th the pain and hemorrhage returned, though the latter was not great. Found the os uteri freely dilated, and a hydatidiform mass protruding from it. As the uterine contractions were feeble, ergot was given, and in less than half an hour the mass referred to was expelled, followed by a large fleshy mole. The hydatids were discharged partly in clusters and partly detached, the entire quantity filling a large chamber-pot. Hemorrhage was not great until the discharge of the last of the hydatids, but then was profuse. It was arrested by ergot, cold, compression, etc., and the womb contracted well. I left her, after ordering nutritious food and stimulants, only to be summoned in a brief time, in consequence of a return of pain and flooding, to her bedside, and found her dead.

Such is a brief history of a case which is extraordinary because of the rarity of its occurrence, and because of the almost entire impossibility of making a positive diagnosis prior to the discharge of some of the characteristic vesicles. The two symptoms most relied upon in the diagnosis of uterine hydatids were present in this case; viz., the rapid increase in the size of the womb, and the repeated attacks of hemorrhage. The persistent nausea and vomiting from which my patient suffered I have not found mentioned as characteristic of this disease, but think them of considerable importance taken in conjunction with the other symptoms.

Cazeaux met with but three cases in his extensive practice, and in but one of them could a diagnosis be made out. He advised puncture and ergot; the patient died. Meigs speaks of having seen several cases, but is not clear in either diagnosis or treatment. He does not speak of diagnosing a case previous to the discharge of vesicles. He deprecates the production of "any body's labor." Churchill advises noninterference "until uterine effort commences," and that repeated hemorrhages to any great extent should be controlled by the tampon and cold cloths; if these fail he advises ergot. Ergot failing to bring on contractions, he would decide on "manual interference by the size of the uterine distension. If that be equal to pregnancy at seven months, the hand may be introduced and mole brought away; but if under that size, we run risk of doing more mischief by being meddlesome than would result if patient were left alone." In the management of a case such as has just been detailed, is the physician justified in emptying the womb whether an unequivocal diagnosis can be made or not? In reply I will say that were I called to a similar case I should not hesitate to operate at once. In justice to myself I will remark that I was not deceived in the nature of the case, and that I communicated my opinion to the friends of the patient three weeks previous to the discharge of vesicles, notwithstanding I did not feel justified in operating, as the attacks of hemorrhage were easily controlled. Other reflections suggest themselves, but this paper would be protracted beyond the design of the writer.

HUNTINGTON, W. VA.

Remarks. We feel greatly indebted to Dr. Wall for reporting the above case. It is hardly necessary to remind our readers that, as Dr. Graily Hewitt remarks, true hydatids of the uterus is a disease almost unknown in pathology, and there is perhaps not more than one quite authentic case on record. Dr. Hewitt reports such a case in the twelfth volume of the "Transactions of the London Obstetrical Society." In it the vesicles varied in size from a small pea to a walnut. They were distinct from each other. In the fluid which escaped from the cyst, and on the cyst wall, were found minute white bodies, which upon microscopic examination proved to be echinococci heads, having a rhomboidal shape, with a circle of hooklets in the center of the head. Nor is it necessary to state that the profession for some years have been agreed in regarding the ordinary form in which so-called hydatids of the uterus occur as resulting from cystic degeneration of the chorion.

Dr. Wall refers to the nausea and vomiting, which in such a marked degree characterized his case, as symptoms unnoticed by writers on the subject. In the seventh volume of the "London Obstetrical Society's Transactions" Dr. Robert Barnes reports a case where these conditions existed. So too in the second volume of the "Edinburgh Obstetrical Transactions," Dr. Rattray, in narrating a case occurring in his practice, gives the following statement: "Sickness continued both day and night for fully three months, whereas in previous pregnancies vomiting commenced as soon as she became *enciente*, and continued for the first month, but only during the day." And in two of four cases reported by Boivin and

Duges vomiting is mentioned as one of the symptoms. Nevertheless there does not seem any reason for anticipating that nausea and vomiting should be any more necessarily consequent upon hydatigenous degeneration of the ovum than upon normal pregnancy. In the one, as in the other case, these may be most distressing and persistent, or present in but a slight degree. Still Dr. McClintock, an extract from whose work we shall give in a moment, makes "persistent vomiting" one of the symptoms, although certainly some cases have been reported where this condition is not so much as alluded to.

Dr. McClintock states that "although the *diagnosis* of cystic disease of the ovum can rarely be made until the expulsion of some of the vesicles has taken place, still there are certain symptoms whose presence in a suspected case would form a very just ground for believing that the uterus contained hydatids. The early history of nearly all these cases is that of pregnancy up to a certain period, when the ordinary symptoms of this state disappear and are replaced by others, or to the ordinary symptoms are superadded some new and unusual ones. Persistent vomiting, unusual hardness of the uterine tumor, a disproportionate size of the latter to the supposed duration of pregnancy, irregular or sudden discharges of reddish water, are, I believe, the most reliable indications of the presence of this disease."

Once the disease is recognized, we have nothing better or more briefly given as to treatment than that of Dr. Thomas, in his work on "Diseases of Women:" first, full dilatation of the cervical canal by tents and Barnes's dilators; and second, cause the expulsion of the mass by ergot, or remove it with a scoop, looped wire, or other appropriate instrument. Possibly approval of the latter part of this advice might be qualified by suggesting that the fingers or the hand first, and then fenestrated forceps, if necessary, might be better than scoops or curved wires; and finally, that the tampon may be a necessity when the uterus is but slightly emptied, and that injections of a solution of perchloride or persulphate of iron may be equally necessary subsequently.

Is a fatal result to be anticipated in these cases? Not ordinarily; recovery is the rule, death the exception. Nevertheless there are several fatal cases on record, especially where the diseased condition co-existed with albuminuria. It would be interesting to know whether this was the fact in Dr. Wall's patient.

What was the fleshy mole Dr. W. reports as expelled with the last of the hydatids? Boivin and Duges, in one of their cases, speak of there "coming after the last bunch of hydatids a spongy mass similar to a putrefied placenta." This probably was not the fact in Dr. W.'s case, and probably the true explanation of the occurrence of this supposed mole is that it really was a mole; that a twin pregnancy had occurred, and each embryo died: the hydatidgenous mass told of one, the fleshy mole of the other. Nor is this hypothesis at all irrational. In the third volume of the "London Obstetrical Transactions" Dr. J. Hall Davis gives "a case of hydatid mole expelled from the uterus immediately after a living fetus and placenta, at about six months of gestation, the hydatid growth being the degenerated ovum of a twin conception."

In concluding, we must again thank Dr. Wall for having furnished a report of this case. T. P.

Reviews.

Refraction and Accommodation: A Review of Dr. D. S. Reynolds's Critique on Dr. C. S. Fenner's Pamphlet.

The July number of this journal contains a review by my friend, Dr. Reynolds, of a short article on Refraction and Accommodation, written by myself; and I beg a brief space to reply here to some of the criticisms made by Dr. Reynolds. I shall confine myself largely to extracts from established authorities. The reviewer says:

> "Our author, on the first page, makes this remark: 'Many cases of amblyopia that a few years since would have been considered as incurable are now entirely relieved by neutralizing the aberrations of refraction by appropriate lenses.' We had been under the impression until now that amblyopia in its various forms belonged to the retina and not to the refracting media. In fact Dr. Bull, a distinguished specialist of New York, and many others, the writer among the number, have during the past two years been experimenting with strychnine hypodermically in the hope of curing this too often intractable disease; and we have even thought that in some cases of amblyopia arising from disuse of the eye, on account of squint, occlusion of the pupil, and the like, after removing the cause of the disuse, the strychnine did good, and might take rank as a curative agent."

I do not see the bearing that the "experimenting with strychnine hypodermically in the hope of curing this too-often intractable disease" has on the assertion that many cases of amblyopia are relieved by neutralizing the errors of refraction by appropriate lenses. The Doctor states that he "had been under the impression until now that amblyopia in its various forms belonged to the retina and not to the refracting media." That I have good authority for the assertion that I make, I refer the Doctor to the following extracts from the excellent work of Soelberg Wells. On page 481* he will find that Wells says: "For it is now known that certain forms of asthenopia and *amblyopia*, which had in former times set all remedies at defiance, are *not due*, as was generally supposed, to *serious lesions of the inner tunics of the eyeball, but are in reality dependent upon some anomaly of the* refraction of the *eye, or a peculiar assymmetry of the organ* (astigmatism). *Since the discovery of these important facts a considerable group of cases have been found to be amenable* to treatment; cases which had formerly sorely puzzled the oculist, and were by him *too often deemed incurable.*"

Again the same author (page 515), under the head of astigmatism, says: "Donders has shown that it is of frequent occurrence, and that *many cases of congenital amblyopia are due to it, and may be cured by proper cylindrical glasses.*" The reviewer next proceeds as follows:

> "In the next sentence after the one devoted to the subject of amblyopia we are told by the author that 'it is definitely settled that the inherent power possessed by the eye of adapting itself to see an object clearly and distinctly at different distances is due to the voluntary action of the ciliary muscle on the crystalline lens, causing the latter to change its curvatures as the object approaches or recedes from the eye, so that within certain limits diverging rays coming from it are united in a focus on the retina.'
>
> "We had always supposed that union of the rays constituted the focus, no matter where that union occurs, whether 'in a focus on the retina' or *in* any thing else. It is indeed generally believed and taught by most of the eminent oculists that the ciliary muscle is one of the prime factors in the production of the accommodative effort; but this is not definitely settled, to say nothing of that muscle's power to 'act on the crystalline lens.' . . . . . .

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* The edition of Wells's Treatise on the Eye from which I make these extracts is the one published by H. C. Lea, Philadelphia, 1869, and edited by Dr. J. Minis Hayes. The italics are my own, introduced to call attention to special points.

Many other authorities might be cited to show that it *has not been 'definitely settled* that the ciliary muscle acts on the crystalline lens' *so as to produce any effect on the accommodation of the eye whatever.*"

To prove the correctness of my assertions I again refer to Wells (page 492). He says: "It has at length been *definitely settled*, chiefly by the experiments of Cramer and Helmholtz, that the necessary change in the refraction of the eye during accommodation is due to an *alteration* in the *form* of the *crystalline lens*." On page 493 he adds: "The question now arises, in what manner is *this change in the form of the lens* produced? There can be *no doubt now* that it is *entirely due* to the *action of the ciliary muscle*." In Stellwag's work on the eye (page 575) he says: "The variations in the amount of adjustment of the dioptric apparatus is caused *solely* by *changes* of *curvature* of the lens *(Cramer, Helmholtz)*. The *causes* of these *changes* are the *action of the ciliary muscle* and the great elasticity of the normal crystalline lens when the capsule is uninjured." He further states this *action* of the ciliary muscle *on the lens* continues when the eye is in a state of rest. On page 577 we find the following: "Like all other muscles, the muscle of accommodation has a certain tonicity, which causes its *action* on the *convexity of the lens* to continue while at rest." The question that is *not definitely settled* is as to the *manner* in which the ciliary muscle acts so as to produce changes in the convexity of the lens, whether or not this action is direct or indirect. Stellwag (page 576) says: "The *exact manner* in which the ciliary muscle causes an *increased convexity of the lens* is *still uncertain;*" and then he goes on to give the views entertained by physiologists. Donders (p. 26) says: "It therefore remains only to attribute to the musculus ciliaris the important quality of accommodation muscle; . . . but the mechanism whereby the contraction of *this little muscle alters* the *form* of *the lens* is not yet satisfactorily and convincingly brought to light." I think the above extracts are sufficient to prove to the readers of the Practitioner, if not to the reviewer, that it will be a difficult matter for him to "show that it *has not been 'definitely settled that the ciliary muscle acts on the crystalline lens' so as to produce any effect in the accommodation of the eye whatever.*"

The following assertion in the review as applied to accommodation—"We had always supposed that union of the rays constituted the focus, no matter where that union occurs, whether 'in a focus on the retina' *or in any thing else*"—I do not comprehend, nor what he means by "or *in* any thing else." The entire object of accommodation is to unite rays of light emanating from a body placed at different distances from the eye in a focus on the sensitive layers of the retina, so that a distinct and well-defined image of the object may be formed on that delicate structure.

Notwithstanding Dr. R. differs with me, I still adhere to the opinion that the forced contraction of the recti muscles has a very decided effect on the accommodation of the eye, as illustrated by the experiment that I suggest (page 13) for one to try on his own eye. I may be in error as to the manner in which the forced uniform contraction of these muscles act on the eye, so as to render very fine print clear, distinct, and largely magnified when held an inch from the cornea; and I shall gladly accept any explanation more satisfactory than the one that I have given. But to show that there is nothing new or particularly startling in the announcement of my belief that a strong uniform contraction of the recti muscles slightly increases the length of the eye in the direction of its optic axis, and which the reviewer assures us "is known to produce just the contrary effect," I quote the following from Mr. Laurence: "Le Camens, Shroeder, Von der Kolk, and Arlt were advocates for the power of the extrinsic muscles of the eye, the recti and obliqui, producing accommodation by *elongating the axis of the globe.*" The reviewer refers to Donders to show that hypermetropes may often be recognized by their "*retracted*" eyes, as follows:

> "Almost all late writers, and especially Donders, say that hypermetropes may often be recognized by their *retracted* eyes; *thus proving at once, without further argument*, that *contraction* of the *recti muscles consentaneously* is equivalent* to a *perceptible* diminution of the antero-posterior diameter of the eyeball."

Now I differ with Dr. R.; I do not think the "*retracted*" eyes of hypermetropes prove any thing one way or the other on the subject under consideration. Donders says: "The rule is, however, that hypermetropia depends on a peculiar typical structure of the eye, which may be called the *hypermetropic structure.* The hypermetropically-formed eye is a *small eye;* in all its dimensions less than the emmetropic eye, but especially in that of the visual axis. . . . The hypermetropic eye is in general an *imperfectly-developed eye.* . . . The hypermetropic structure is *hereditary.* . . . Thus the *orbit* is *less deep*, and to this corresponds a smaller eye, with a *shorter axis* of vision, which again in its turn is connected with a *shallower socket.*" Now I do not see how this "typical," "imperfectly developed," "small," "*retracted*" eye, "with a shorter axis of vision," and connected with a "shallower socket," proves "at once," "*without further argument*," that a perceptible diminution of the antero-posterior diameter of the eyeball is "*equivalent*" to contraction of the recti muscles consentaneously. The Doctor continues thus:

> "The following statement is made by Dr. Fenner: 'I am satisfied that in this country, particularly in the South and West, the normal visual angle is less than five minutes. From a large number of tests, I have found that most persons have clear and sharp sight with a visual angle of four minutes. In Germany, and some other European countries, the inhabitants are proverbially short-sighted. An angle of five minutes is the smallest one (except in small children) at which they can ordinarily see with distinctness.'"

To which he adds this: "Then, according to this, Snellen's test-types are improperly graded for the determination of the acuity of vision."

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* I am not positive that I understand correctly the meaning of the expression "contraction of the recti muscles *consentaneously*." Webster defines consentaneously to mean agreeably; consistently; suitably.

An angle of five minutes is the one universally adopted "as the standard for determining the acuteness of vision, and the test-types of Snellen and Girard Tuelon have been devised upon this principle." It is a well-known fact that the angle of five minutes was adopted as a standard of measurement, because it was the smallest one at which the majority of the inhabitants where these tests were first constructed or devised could see with distinctness. Hence, as Stellwag remarks, "it is usually considered as the normal angle." Now, if the majority of the inhabitants of another nation or class of people see distinctly at a smaller angle, I see no impropriety in calling that particular angle the normal one for that nation or class of people. I would not by any means make any change in the angle of five degrees as a standard of measurement; for to do so it would create the same confusion that now exists in the measurement of distances by English, French, or Prussian feet and inches, or in the different standards of nations as to the values of gold and silver coin.

We pass to page 11 of the review for the following extract in order that it may appear in connection with the subject of test-types:

> "Just here, before dismissing the subject of test-types, we would mention that those now in almost universal use were devised by Snellen, a Dutchman of Utrecht. (*It is important to note that he is not a German.*)"

Query: who has accused Snellen of being a German? (I hope the reader will bear this "*important*" fact in mind that Snellen is a *Dutchman*, and not a *German.*) He continues:

> "So then it appears that the Dutch and Hindoos, as well as Americans, have superior vision to the Germans. But, unfortunately for Dr. Fenner's *discovery*, Snellen is not a German, but a Dutchman, living *in* and writing *at* Utrecht, in Holland. Donders likewise gives us in his estimate the state of vision possessed by

his own countrymen, viz., the Dutch; so that it does not appear where our author learned that they (the Germans) are 'proverbially near-sighted.'"

(Here we have another announcement of the vitally "important" fact that "Snellen is not a German, but a Dutchman, living *in* and writing *at* Utrecht, in Holland.")

The great number of young persons in Germany wearing near-sighted glasses is the subject of remark by most travelers in that country, and Donders says: "Myopia is not equally prevalent in all countries. It is certainly more especially proper to cultivated nations. . . . . Among the states of Europe visited by me I, both in *general life* and in the *cliniques*, nowhere met *relatively* so many myopes as in Germany." The above extract shows that Donders has snatched from me the *honors of discovery* that my excellent but perhaps too partial friend so generously awards me.

Dr. R. continues as follows:

> "Under the head of astigmatism Dr. F. says (page 22) that to detect this 'Graefe invented an optometer, composed of fine wires crossing each other at right-angles.' The Philosophical Transactions for 1793 inform us that Thos. Young, the discoverer of astigmatism, made use of the wire optometer in the examination of his own eye. Graefe was born thirty-five years after the use of the wire optometer was published to the world by Dr. Young."

It is well known that Young used a wire optometer for determining astigmatism in his own eye; and it is equally well known that Von Graefe devised the instrument known as "Von Graefe's wire optometer," a description of which is given by Wells, who says that "the best objects for testing the range of accommodation are Snellen's test-types or Von Graefe's wire optometer." I hope the interests of science will not seriously suffer because I have stated that Graefe "invented" the wire optometer that bears his name.

Our reviewer, in a pamphlet issued by him (entitled "The Ophthalmoscope," etc., by D. S. Reynolds, M. D., 1872), informs us that "Helmholtz announced his *discovery*, in 1851, of an *instrument*, by the proper use of which," etc. . . . . And that "this great *discovery*" of the instrument "*remained* for the first four years almost exclusively in the *hands* of the German ophthalmologists." On the next page he informs us that "there has been more than thirty *inventors* of ophthalmoscopes." Is there any thing strange then that there should have been two persons who invented different forms of wire optometers, even if one lived thirty-five years after the other?

Next we have the following startling announcement, which some would think sensational:

> "But we pass now to the *most remarkable of the many remarkable statements* contained in this treatise. Under the head of 'remarks' this occurs: 'For most of our knowledge of the diseases of refraction and accommodation we are indebted to the researches of that wonderful people, the Germans. . . . . Among those worthy of all honor in connection with the subjects of this article I would mention Helmholtz, Donders, Graefe, Knapp, Arlt, Stellwag, Jaeger, and Hering, who, with their fellow co-laborers, have in less than a quarter of a century built up an entirely new science in this department of ophthalmology.'"

After the above extract I find some four pages devoted to a *resumé* of history. Now I have not the least objection to the Doctor's writing history, which in the present instance is correctly given, as any can testify who will read the historical remarks of certain authors; but these four pages of history have no bearing whatever on the *article* under review, for the latter nowhere states when, where, or by whom the diseases of refraction and accommodation were DISCOVERED.

That I am not alone in my estimate of the value of the contributions to ophthalmological science by the Germans, I quote from Charles E. Hackley and D. B. St. John Roosa, translators and American editors of Stellwag's great work on the eye, as follows: "Moreover, without disregarding the great assistance rendered by English and French surgeons, we must consider the present *advanced position* of ophthalmology as due in a *great measure* to the *labors of the Germans.*" Graefe was a German, and Herr Max King says of him: "*We may affirm without exaggeration that the recent extraordinary development* in ophthalmology *took its rise chiefly from Graefe's own person and labors.*"

It is really a matter of small importance, so far as the interests of science are concerned, what may be the nationality of those laboring in her behalf, as long as mankind has the benefit of those labors. The contributions of Donders and Snellen are equally valuable whether these distinguished men may be Germans or Dutchmen. As before stated, I do not see any bearing that this *resumé* of history has on any thing that is to be found in the article under review, as nothing is said in the latter in reference to the "discovery" "of the matters treated of;" and I certainly learned myself more than a "quarter of a century" ago, from books placed in my hands as a student, that such matters existed; but it is *since* that time that science "celebrates her triumph," and our knowledge of this department has "acquired the exact character which makes it also worthy the attention of natural philosophers and physiologists." It is *since* that time that "ophthalmology has been raised from a mere appendage to medicine and surgery to the rank of an independent science." It is *since* that time that Soelberg Wells offers an apology for a new "*English* Treatise on the Diseases of the Eye," "the want of a work which should embrace the *modern doctrines* and *practices* of British and foreign schools of ophthalmology, and should thus *enable* the practitioner and student to keep up with the *knowledge* and *opinions* of the *present day.*" It is *since* that time that "*certain forms* of *amblyopia*" that sorely puzzled the oculist, and were by him too often deemed incurable, and "set all remedies at defiance," have been *discovered to be in* "*reality dependent* upon some *anomaly* of the *refraction* of the eye, or peculiar assymmetry of the organ," and have "been found to be *amenable to treatment.*" It is since that time that it has been "definitely settled that the necessary change in the refraction of the eye during accommodation is due to an alteration in the form of the crystalline lens;" and that there "can be *no doubt now* that this change is *entirely* due to the *action* of the ciliary muscle;" and that even a "*certain tonicity*" of this muscle "causes its *action* on the *convexity of the lens* to continue while at rest." It is *since* that time, even as late as 1873, that a *reviewer* of a "neat pamphlet of twenty-nine pages" attempted to prove that "it *has not been* '*definitely settled* that the ciliary muscle acts on the crystalline lens' so as to *produce* any *effect* in the *accommodation of the eye whatever.*" It is *since* that time that Graefe, "who was *born* thirty-five years after the use of the wire optometer was published to the world by Dr. Young, *invented*, devised, constructed, or caused to be constructed, the wire optometer that bears his name; and that Snellen, who is a "*Dutchman*," devised his test-types. It is *since* that time that Helmholtz, Donders, Graefe, Knapp, Stellwag, Arlt, Jaeger, Hering, and others with scarcely less honored names, have ascended to the pinnacle of fame and sculptured their names high on the rock of ophthalmological science, where they will be read and honored ages hence. It is *since* that time that the writer of an unpretending little pamphlet of twenty-nine pages made "the most *remarkable of the many remarkable statements*," that "for most of our knowledge of the diseases of refraction and accommodation we are indebted to the researches of that wonderful people, the Germans!" And furthermore, he gives a few of the names worthy of all honor, in connection with the subjects on which he was writing, by whose joint labors a new science has in less than a quarter of a century been built up. He mentions Helmholtz, Donders, Graefe, Knapp, Arlt, Stellwag, Jaeger, Hering, and their fellow co-laborers (among whom he might with great propriety have added the names of such men as Wecker, Liebreich, Laurence, Bowman, and "*Snellen, who is not a German, but a Dutchman, living in and writing at Utrecht, in Holland.*" I give the beginning and the ending of his history.

"The subjects treated of in the pamphlet under review are Refraction and Accommodation, Myopia, Hypermetropia, Presbyopia, Astigmatism, and Asthenopia. . . . We believe we have thus shown that all the matters treated of by Dr. Fenner were known to the profession more than 'a quarter of a century ago;' and that the Germans had nothing to do with their discovery, *except* in the single instance of the *ophthalmoscope*, by Helmholtz, in 1851."

Here we have the announcement that "the *subjects* treated of in the pamphlet under review are refraction and accommodation, myopia, hypermetropia, presbyopia, astigmatism, and asthenopia;" "and that the Germans had nothing *to do with their discovery* EXCEPT" the ophthalmoscope, which has not been "treated of by Dr. Fenner," either in the paper under review or in any other paper. Surely this winding-up sentence would lead us to suspect the *nationality* of the reviewer. Germans and Dutchmen seldom construct such sentences.

Here again we have the announcement of the *discovery of the ophthalmoscope* by Helmholtz. Query: in what age of the world was that ophthalmoscope invented and constructed that Helmholtz *discovered* in 1851.

In deference to the peculiar sensitiveness of my friend, Dr. Reynolds, as to the honors belonging to the *Dutch*, should a second edition of my little treatise be called for I will insert the word Dutchmen after Germans. C. S. F.

Transactions of the Kentucky State Medical Society, Eighteenth Annual Session, 1873.

This is a handsome little volume of one hundred and sixty-eight pages. Instead of the prolonged bitter ethical squabbles that have so frequently disgraced the meetings of medical societies, the present volume of Transactions shows a most healthy state of affairs in our state society. While there are some things in this volume with which we might find fault, there is upon the whole much to praise; in fact, we are proud of the society for the first time in many years. The last meeting was devoted almost entirely to the consideration of scientific subjects, and what we are especially inclined to praise, the earnest discussion of practical medicine by the members in open session. The subject of discussion being *cerebro-spinal meningitis* elicited some important facts concerning the pathology and treatment of the disease as observed by different members in their respective localities during the late epidemic.

Passing over the able and gracefully-written address of the president, which has already appeared in this journal, and an elaborate paper, by Dr. E. Richardson, denouncing the present system of medical education, we find "History in Disease," a spirited paper, by Dr. J. J. Speed. In April, 1859, Dr. S. wrote: "The great need of the American people is a race of doctors who have the courage to tell them plainly, TAKE LESS PHYSIC. For generations the habit from babyhood up to the lean and slippered pantaloon has been to medicate for every conceivable ailment." . . . . He adds in the present paper: "The conviction of that day is deepened and confirmed by the added experience of fourteen years." Dr. Speed justly complains of "the disastrous reign of polypharmacy," and yet the past decade has witnessed a most decided improvement in this respect.

The "Report on Finance," by Dr. Joseph Smith, of Lexington, is brief, well written, and contains some very pertinent remarks in relation to the scientific as well as the financial welfare of the society.

"Obstetric Procedures among certain of the Aborigines of North America" is the title of a very carefully-prepared and entertaining paper by E. McClelland, M. D., Assistant

Surgeon U. S. A., copious extracts from which appear in the "Clinic of the Month."

The "Report on Surgery," by Dr. J. W. Thompson, evinces that painstaking labor for which the author is becoming so distinguished.

Dr. D. T. Smith's "Report on Vital Statistics" embraces also the subject of moral philosophy, political economy, etc., and winds up by informing the reader that, "in view of the direction and rapid strides of the present day, it is no strained conclusion that society's statistics will soon become the basis of the social conscience."

The "Report on Registration," by Dr. S. A. Foss, contains some practical suggestions, which have already been acted upon by the society with every prospect of early success. This registration-law question has been discussed without avail, until now, for nearly ten years. Committees have gone almost annually to Frankfort, and returned as they went; but Dr. F., in a brief, well-written, common-sense paragraph or two, has solved the problem, and next winter a petition will be taken to the legislature, by nearly every member of both houses, asking the passage of a suitable registration law.

A paper, by Dr. R. C. Brandeis, on the Laryngoscope, though it occupies but nine pages of the Transactions, brings this most interesting subject fully down to the very latest word.

An article on the therapeutic properties of electricity, translated from the German by Dr. B. Tauber, of Paducah, while it possesses but little intrinsic interest, shows the translator to be capable of doing such work uncommonly well.

Major Bidwell's response to the toast "Law and Medicine" embodies some very beautiful sentiments, which the publishing committee very wisely preserved and published. Major B. is a scholar, and we feel assured that all who read his remarks will agree with us in the opinion that, had he pursued it, he would have reached the same eminence in medicine which he has so justly attained in his chosen profession of the law.

Memoirs of Drs. J. Taylor Bradford and Hugh Rodman, late members of this society, by Dr. Lunsford P. Yandell, form the last article in the volume. A very inaccurate list of the names of members concludes it. Upon the whole, however, the secretary and the publishing committee deserve the thanks of the society and the profession for the very prompt and faithful discharge of their duties. D. S. R.

Clinic of the Month.

Obstetric Procedures among the Aborigines of North America. — Dr. Eli McClellan, Assistant Surgeon U. S. A., read at the late meeting of the Kentucky Medical Society a paper on this subject, full of interesting facts and experiences, which we had hoped to publish in full, but our space limits us to a few extracts.

"Among the better classes promiscuous sexual intercourse, as far as the unmarried are concerned, is almost entirely unknown. While parents upon one hand expose their children to imaginative excitation, they guard their persons with considerable care. Except in the larger towns, defiant prostitution is unknown. Menstruation is established between the thirteenth and fifteenth year among those who constitute the better class; but among the lowest — those in whose lives scenes are constantly being enacted which rival in iniquity those reported by Cobden or Mayhew, or, lacking the refinements of vice, equal those of Constantinople or other Mahommedan cities—it occurs from one to two years earlier. Among such people additional arguments may be found to favor the theory 'that precocious menstrution' *is* influenced more by licentious practices than climatic influences or hereditary peculiarity. Nor in this case can the argument against such theory be advanced 'that the utter depravity and promiscuous cohabitation of the lowest English peasantry and the lewdest classes in such cities as London, Liverpool, Manchester, and Birmingham does not induce precocious menstruation.' It must be borne in mind that female children in such condition are both underfed and overworked, while among the New Mexicans the children lead an idle life, with naught to distract them from their natural inclinations; that at an early age they become addicted to the use of tobacco; and that chile or pepper, green or dried, is an invariable condiment of all meals, and used to an excess that rivals the Indian use of curry. Marriages occur at an early age, often before the menstrual functions have been established. Subjected thus early to the incidents of matrimony, the early menstrual months are periods of irregularity and suffering. Diseases of the uterus and its appendages are developed at an early period. More than one instance came to my knowledge in which ovulation was followed by impregnation, but the wife never menstruated until one or more children had been born.

"The disorders to which these females are liable can in part be attributed to the neglect of hygienic laws and the indolent life which they lead. The surface of the body is rarely protected, save by a chemise, shirt, and shawl. Undergarments are almost unknown. The extreme altitude of the territories occupied by their race, the sudden and great variations of temperature to which they are exposed, are fruitful sources of uterine diseases, while the peculiar domestic relation and the stimulating diet which have already been noted, combined with the erotic imaginations of indolent vice, co-operate. 'To excite, but always in vain, is to provoke disease, irritate the body, and desiccate the soul.' Abortions are rarely procured; sexual frauds (so-called) are never attempted; infanticide is almost unknown. Masturbation prevails to some extent among both sexes.

"Promiscuous sexual intercourse among the unmarried of the Apache Indians is common. They are polygamists. The women are unclean and debased. The Navajoes, a branch of the Apache tribe, live in the rudest huts and lead a drunken, worthless life. The women are debased and prostituted to the vilest purposes. Syphilitic diseases abound. Polygamy exists among the Utes also. Their females are rigidly secluded from strangers, and they compare most favorably with those of the other tribes. In these tribes menstruation is established at from the fourteenth to the sixteenth year. Menstrual disorders are common, but they seldom reach the eye of intelligence. Menstrual superstitions abound. At this period the woman is 'unclean;' 'she must not remain in camp, but must live apart.' They are married young, without reference to menstruation; pregnancies are delayed, and families rarely contain over three children. Twins, triplets, or monstrosities are almost unknown.

"Among Indians pregnancy and parturition are fraught with the same dangers as they are to civilized women, although the exposed lives they lead prepare them to brave and overcome perils to which delicate women succumb. That easy and unassisted labors occur there is no attempt to deny. Indian women do step out from the line of march into the brush and at night come into camp with a new-born child. Authentic instances are in our possession of delivery being effected in strange positions and under curious surroundings. One in which a Blackfoot woman, taken in labor at a frontier house, went out of doors to a sheltered position on a snowbank, there delivered herself of the child, and returned to the house; another, of an Osage, who was taken in labor while on horseback and on the march; she delivered herself and dressed the baby, although her pony never left the trail; but it must be known that she was riding upon a large, broad pack, upon which she could recline. These cases, however, for heroism do not compare with the young woman whose case is related by Dr. Bassett, who unassisted performed the cesarian section upon herself while lying upon a snow-drift.

"To the Mexican female parturition is attended with greater danger than it is to those of more civilized races, on account of the extraordinary manipulations to which they are subjected by their attendants. The fact has already been noted that in the house inhabited by them the rafters are invariably uncovered. In commencing housekeeping their arrangements would be incomplete without two strong iron hooks, which are driven into said rafters about two and a half or three feet apart. The location selected is generally a little off the center of the roof and toward the fire-place and chimney, said hooks being destined to play an important part in the obstetric history of the family. The patient having declared the occurrence of labor-pains, all the near friends of the family are summoned, male as well as female. Two stout ropes are secured to the aforementioned hooks, the floor beneath them is covered with undressed sheep-skins, and upon these the patient kneels, with her thighs widely separated, her body maintained in its upright posture by the aid of the ropes. A male, selected on account of his strength, and to whom the term 'el tenador' (the one who holds) is applied, now places himself on the floor behind the patient, encircles her waist with his arms so that her buttocks rest upon his abdomen, and commences a steady, constant, and oftentimes violent pressure upon the uterine tumor. The midwife stations herself upon the floor, but in front of the patient. Her duty now is to knead, and, if too long a period occurs between the pains, to seize the abdomen with both hands and execute a series of spasmodic jerks. When not thus employed she constantly manipulates in order to soften the genitalia. In this position and thus assisted the patient is kept until nature, assisted by the strength and awkwardness of the attendants, effects the delivery, or they become convinced that some other procedure must be resorted to. During all this time 'el tenador' keeps up his pressure, increased when the pain comes on, and if possible never relaxed, so that the advance gained may not be lost. No care is taken of the perinæum, nor does the idea occur to them that this may be necessary; they expect it to 'rip,' and if an unusual laceration occurs the patient suffers in silence.

"The child having been delivered, the patient is placed upon her back and allowed to rest for a time. If the placenta be not expelled, they proceed to effect its delivery by strongly compressing the abdominal walls, by traction on the funis, and by shifting the patient from one side to the other. When successful the woman is placed upon her bed with unchanged clothing, a long, narrow woolen band is wrapped many times around her abdomen, her head is bound with linen cloths, and she is ready to receive the congratulations of her friends. As to the child, a rather curious custom prevails as to the treatment of the cord. It is cut from three and one half to four inches in length, a stout ligature is applied about one inch and a half from the umbilicus, when the midwife with a brand of fire proceeds to char and roast all that portion beyond the ligature. Many superstitions exist by which different communities are influenced as regards the treatment of the cord. All unite in affirming the necessity of adopting measures which will prevent the cord from ascending within the maternal abdomen, thus becoming lost; and once lost the only guide to the 'after-birth' is gone. Some midwives will not sever the cord until the placenta is extracted; others make bold to do so, but always adopt the precaution of attaching the placental extremity by a stout cord to the thigh of the patient. So much for cases in which nature asserts her power and delivers the unhappy woman from her tormentors.

"In cases where much delay occurs, or where after the labor has progressed a considerable time the midwife can not feel the descending head, although profoundly ignorant of presentations and positions, she announces that some other procedure must be resorted to. Before adopting the more complicated of their devices they endeavor to soften the parts by applications of steam and smoke. To accomplish this a basin is filled with glowing embers, upon which is sprinkled a powdered aromatic root, the basin is placed between the thighs of the kneeling woman, and its exhibition is continued from twenty to thirty minutes; or a large vessel of water in which is placed certain herbs is caused to boil and the vapor to arise to the person of the patient. These simple means being ineffectual, the patient is caused to stand upright, when, several of the strongest persons present taking her by the shoulders and knees, she is violently shaken, which exercise is closed by a series of short, sharp, wrenching jerks. She is then placed again in the 'ropes,' and the squeezing process is resumed. Being still unable to deliver the child, the operation is repeated; and if still unsuccessful it is varied by suspending the patient head downward, her person being held as in the preceding maneuver. Should these efforts be still unsuccessful, the midwife announces that it is necessary to change the position of the child. She proceeds to remove all articles of clothing from the lower portion of the patient's person. A long, shallow wooden bowl is placed over her abdomen and turned quickly from right to left with a grinding motion. Should this still prove ineffectual, a horseman is dispatched for the nearest American doctor, a rosary is placed about the patient's neck, and all present join in commending her to the saints. San Ramon or La Niña (the Virgin) are the most powerful to whom recourse can now be had; and as the doctor often lives fifty, sixty, or more miles away, ample time is afforded for their intervention. If one will not help, in spite of candles or other offerings, the other will surely take advantage of his or her colleague, and lend his or her most efficient aid. But saints, even the best, seem at times disinclined to aid humanity, or they may be too much occupied with other affairs, when the only recourse the poor mortals can have is to discover the particular saint on duty at that particular time. A large candle is notched with the thumb-nail to ten, fifteen, or more equal spaces; each space is designated by the name of some saint; the candle is lighted, and as soon as it burns down to the allotted portion of the then inclined saint he will help right willingly, and try his best to effect delivery before his short time melts away. But with the passing light of the candle wanes the strength and life of the poor patient, buffeted and distressed, rent by useless, senseless torture; and not unfrequently she passes to her final rest with a smile at last upon her tired, weary face, while the earnest, anxious doctor is galloping weary miles, trusting he may yet be in time to afford her some relief.

"The description which has been given is the modern practice of obstetrics among these people. Until quite recently the obstetric chair or stool was in vogue among them. Of what the ancient stool consisted we have been unable to learn; the modern was a large chair, in which '*el tenador*' first seated himself; then the patient squatted upon his knees, with the inevitable arm and rope accompaniment. The obstetric customs of the Pueblo Indians closely follows that of the Mexicans, if they are not in all points identical. The Apache woman when labor commences is placed in a small hut and left to herself. Should her band be upon the move, sufficient food is left with her, and she is abandoned to her fate. If the labor terminates favorably, as it most always does, she regains her party. But instances are known in which scouts through the country infested by these Indians have discovered the remains of mother and child in these isolated huts. The Navajoes have adopted many of the customs of the Mexicans. A fatal termination of labor is rare. The parturient female assumes the posture of the Mexican in similar cases, and is supported by a lariat thrown over a limb of a tree, or she supports herself from a low branch. But the assistant is now in front, and aids the woman during pains by a finger inserted at the umbilicus, from which point pressure is made steadily upon the fundus uteri. The Ute female in summer accomplishes her labor in the open air, squatting or kneeling by a tree which they may conveniently grasp. They are assisted by a band passed around their abdomen, and which is managed by an old woman. Lingering labors are treated as by the Mexicans, with the exception of rapid and violent changes of position, the patient being suspended in a blanket or robe.

"A friend, who has acquired a considerable obstetric experience among their people, remarks: 'It is surprising with how little difficulty girls of fourteen or fifteen years of age are delivered in childbirth. It is by no means an unusual occurrence for a labor to be terminated in six or less hours, and the only difficulty experienced is in persuading them to remain recumbent a sufficient time.' Hemorrhagic labors are frequent. The American physician is most frequently called from that cause; and also to deliver the placenta. Nor is it surprising that inertia or irregular contractions should succeed the treatment to which the patient has been subjected. Thrombi of the labia and vulva are frequently met with, while ruptures of the uterus, situated fortunately most frequently at the cervix, are by no means rare. Two cases of fracture of the ribs from the violence of attendants came under our notice. For retained placenta the midwife has no remedy save binding a cord around the abdomen of the patient, and this, with an occasional dose of a powder obtained by burning the ears of a freshly-killed hare, is the only means at her command for arresting hemorrhage. Tradition, in the settlement of Socorra, points to an old woman who was taught by a Padrê to take the after-birth by the hand, but she was probably a myth. At all events she has left no successor."

EXCERPTA FROM GERMAN PHARMACEUTIC JOURNALS by Mr. C. Lewis Diehl, Professor of Theory and Practice of Pharmacy in the Louisville College of Pharmacy.

Chlorine-water—According to Mylius chlorine-water is best administered with syrupus simplex, by which it is also conserved better than with honey, glycerine, or syrupus althaæ. Mucilage of gum will also answer well. The author finds that chlorine-water without such addition will give off its chlorine much more rapidly.

Opium culture in Germany— Mr. Julius Jobst states that the cultivation of the poppy for its opium is carried on to an important extent in Wurtemberg, and that the quality of the opium yielded is superior to the oriental product, containing from twelve to fifteen per cent. of morphia. During a tour in Asia Minor, in the winter of 1871, he became convinced that the climate of Wurtemberg is in every respect as well suited to the culture of opium as is that of Asia Minor, where, for example, it is regarded as a necessary condition to a good opium crop "*that the poppy-field should be covered with snow during several months.*" Jobst secured a quantity of poppy-seeds from the district producing one of the most valuable varieties—Boghaditsch opium—with which he has made comparative experiments with the following results: The oriental poppy-plant is of a lighter color than the indigenous poppy, has dark, violet-colored flowers, remarkably few leaves, and reached a height of two feet; the capsules are small, but well filled with extremely small bluish seeds. Owing to its small growth it is not exposed to the same extent to the influence of storms as is the taller indigenous variety, and it ripens several weeks earlier. The oriental variety yielded a little less opium than the indigenous variety, but the morphia strength of the two opiums is nearly the same — opium from oriental seed containing 12.6 per cent. morphia, 0.12 per cent. codeia; opium from indigenous seed containing 12.8 per cent. morphia, 0.09 per cent. codeia. The author states that in the neighborhood of Saarau and Bohrau, Silesia, opium has been cultivated which yielded thirteen to fourteen per cent. morphia, three to four per cent. more than oriental opium yields.

From the report of the Chamber of Commerce of Breslau, 1872, it appears that the experiments upon opium culture have been discontinued in Silesia, as it has become evident that, while the cultivation of the poppy for its seeds is very remunerative, its cultivation for its opium is unprofitable. The yield of opium is small, and its collection causes a diminution of the seeds.

But this does not agree with the experiments of Julius Schrader, who has found that the annual yield from capsules from which opium had been collected was the same as from capsules which had remained intact. The opium obtained was a fair yield, and contained eleven per cent. of morphia. There was no difference in the yield of fixed oil from the seeds as obtained from the two sources.

Carbolic acid—In the course of his investigations upon the value of carbolic acid as a disinfecting agent, P. C. Plugge also studied its power as a reducing agent, and discovered incidentally that nitrate of protoxide of mercury containing traces of nitrous acid served as a delicate test for its presence. When a solution of such a salt is boiled with a solution containing carbolic acid a reduction of mercury occurs, and the liquid assumes sooner or later, according to its dilution, an intense red color. The reaction is distinct in one sixty-thousandth dilution, and is manifest even when the dilution is one two-hundred-thousandth.

Alcohol from lichens—The production of alcohol from lichens assumes gradually the character of a regular industrial pursuit in northern Finland, Russia. The quality of the spirit gives eminent satisfaction, and its manufacture from the above source—first practiced in Sweden—should be encouraged, as thereby the cereals will find more legitimate use in countries where they are often very scarce.

Gum tragacanth—According to J. M. Stöckel the gum tragacanth exported from Smyrna is collected from the plant growing upon high mountains in the interior of Asia Minor. It is most abundant in the neighborhoods of Caraïssar, Yalovaschi, Burdur, Musul, and Karaman. The gum is collected partly naturally exuded and partly by incision. If it is allowed to remain upon the plant too long it becomes dark, hard, and knotty, instead of flaky and white. The best gum is collected in the neighborhood of Yalovaschi and Burdur, the collections continuing until the rainy season sets in, which occurs usually in September. When this occurs earlier it becomes necessary to house the crop as rapidly as possible, and this sometimes causes the crop to be more or less inferior than those of other years.

Olive-oil—It has been observed that rich harvests of olive-oil occur with tolerable regularity every third year in the countries supplying the Smyrna export markets. The oil growing in the interior of Asia Minor, which is of a very handsome deep-yellow color, is said to be inferior to that grown near the coast, which is greenish in color. The expression of the oil is still conducted in very rudely constructed wooden presses, which J. M. Stöckel thinks would be advantageously supplanted by the iron presses in use in Italy and Spain, from which the oil flows purer and requires less time to clarify.

Pills of protoxide of iron, when prepared by the formula proposed ten years ago by W. Kirchmann, keep perfectly. 8.0 grm. crystallized sulphate of iron and 1.3 grm. calcined magnesia are intimately mixed and formed into sixty pills by the aid of sixteen drops of glycerine. They are readily coated with sugar, and are readily soluble in water, leaving a magma of protoxide of iron. As sulphate of iron and sulphate of magnesia require the same amount of water of crystallization the pills form with the glycerine a very handsome mass, which also prevents the efflorescence of the sulphate of magnesia formed; while the latter, covering the protoxide of iron intimately, prevents its oxidation for years.

False belladonna—Herbalists of Madrid have offered for sale and sold for belladonna a plant which is not belladonna at all, and does not even belong to the solanaceæ. It is called in the Madrid markets "*belladonna silvestre de la casa de campo*," and is botanically the *Cucubalus bacciferus*, Linn., abounding in humid situations in European forests, and especially among the underbrush of the casa de campo and other portions of the province of Madrid. Its botanical characters readily distinguish it from the true belladonna.

ERGOT IN THE TREATMENT OF NERVOUS DISEASES.—Dr. Daniel Kitchen, Assistant Physician to the New York State Lunatic Asylum, makes, in the July number of the American Journal of Insanity, an interesting report of the action of ergot in certain nervous affections. He used the fluid extract prepared by Squibb, and the aqueous extract, or ergotine, made by Merck, of Vienna. The dose of the former is from one to two drachms; the latter from six to ten grains. One drachm of the alcoholic extract of Squibb's preparation is equal to about six grains of the ergotine. He also used a few ounces of a solid extract, made by Squibb, which is about equal in strength to imported ergotine. The full physiological effect of ergot will last from one half to three quarters of an hour.

"There is probably no condition so annoying to the patient as headache, and certainly it is the most common. In the following forms we have used ergotine with much benefit and comfort to the patient: 1. Headache, depending on plethora or fullness of blood; 2. Headache from anæmia; 3. Headache, depending on changes in brain substance and the membranes; 4. Epileptic headaches; 5. Migraine; 6. Headache depending on disordered menstruation. The most common form of headache is the first, or that depending on a plethoric condition of the blood-vessels of the brain. Of course we can not estimate correctly the amount of pain endured at each sickness, but it depends largely upon the constitutional character and nervous susceptibility of the patient. In plethoric headaches the course is either very short (a few hours at most), or they last for some days. The pain is usually referable to the back of the head, and there is much throbbing of the temporal arteries. In this class of headaches we have used ergotine largely; about one hundred patients have been prescribed for, and in almost every instance relief was given in less than half an hour, and the attack thoroughly cut short.

"In headache from an anæmic condition of the brain the blood-vessels are usually lax, and as a consequence there is a slowness of the circulation. Ergotine contracts the blood-vessels, thereby giving tone to the arterial system; the blood is forced more quickly and regularly through the brain, and of course in greater quantity. Our cases of cerebral anæmia are comparatively few, and experiments are therefore limited; yet in those cases where we have had an opportunity of using it happy results have followed. In epileptic headaches and in epilepsy we have used ergot largely. In *petit mal* there are muscular twitchings, congestions of the face, suffusion of the eyes, and a rush of blood to the head. We have in many of these cases been able to ward off the *grand mal* by large doses of ergotine. We have often combined it with conium, and it seems in this combination to work even more satisfactorily than alone, which is chiefly due, we suppose, to the sedative effect of the conium. In migraine, or sick-headache, we have distended blood-vessels pressing on the ophthalmic division of the fifth nerve, thereby causing the pain; and if we accept this theory, then ergotine, by contracting the blood-vessels, will relieve the headache. In headaches depending upon some disordered condition of menstruation we usually have a fullness or congestion of the cerebral vessels; sometimes, however, it may occur from anæmia of the brain. In both forms the use of ergotine is beneficial."

Dr. K. concludes his paper with the following statements: "1. Benefit of combination with bromide of potassium in epilepsy; 2. It is apt to produce cramps and pain in the stomach, which is remedied by combination with conium; 3. In nervous diseases it soothes all renal irritation and catarrh of the bladder; 4. It dilates the pupil sufficiently to be noticed; 5. Increases both frequency and tension of the pulse; 6. Has no appreciable effect on the heat of the body; 7. In large doses it produces the same effect as conium, by inducing sleep; 8. Its beneficial action in delirium tremens, after bromide of potassium has failed; 9. It combines readily in form of pill with sulphate of quinine; 10. It is a cerebral sedative; 11. Ergotine possesses an advantage over the alcoholic extract in not producing any pain or cramp in the stomach, and is given in smaller quantity; 12. Ergot is not likely to be adulterated, and we always secure an appreciable effect after its administration."

A NEW MODE OF TREATING FUNCTIONAL DYSPEPSIA, ANÆMIA, AND CHLOROSIS.—We copy the following, by Dr. C. E. Brown-Séquard, from Archives of Scientific and Practical Medicine:

"In 1851 I had to treat a very bad case of dyspepsia, and succeeded in curing the patient by a plan of treatment which, I think, deserves attention. Since that time I have employed it with complete or partial success in a number of cases of dyspepsia, of chlorosis, of anæmia, and also as a means of ameliorating or curing nervous affections caused by gastric disturbances or poverty of blood. I could not say, as I have not kept notes of all the cases, how many times it has succeeded or failed. In a number of instances where failure occurred I have found that the patients had not carefully followed the rules, and that the failure was, at least in a good measure, due to this lack of care. In two cases only some increase of flatulency and acid eructation took place for three or four days, when the plan was given up. In a case of dropsy, attended with anæmia, dyspeptic pains were increased for a week, when the plan was abandoned. These are the only instances I remember in which some bad effect was produced by this plan, and this aggravation soon ceased.

"The first patient I submitted to this plan was a scientific man, thirty-four years old, of strong constitution, but from several causes reduced to a lamentable state of health. For about eight years he had been working very hard, taking no exercise, and living almost all the time in a vitiated atmosphere. He slept very little, and usually passed eighteen or even nineteen hours a day writing, reading, or experimenting. His diet was miserable, and, with the object of avoiding the need of much food, he took a great deal of coffee. He gradually, though slowly, became exceedingly weak. His digestion, which had been very good all his life before he began to work so much, had gradually become very bad. He suffered greatly from pyrosis, and a feeling of great distress, and gastric distension after each meal. Acid eructations and gas were frequently thrown up into his mouth, and when he did not vomit he found that his food remained on his stomach so long that in the morning he frequently rejected things eaten the previous day. At last he had to give up work and stay in bed. But no improvement occurred from the rest he then had or from various modes of treatment. His emaciation and weakness and dyspeptic symptoms increased, and his friends decided to have him removed to the country. But he was so weak that he had to be carried in a litter to the railway station. After a few days, finding that he had not improved, I decided to try a radical change of his alimentation as regards the quantity of food to be taken at a time. Instead of *three* meals a day I made him take *sixty* or more. Every twelve or fifteen minutes he took two or three mouthfuls of solid food, chiefly meat and bread. He drank a little less than a wine-glass of Bordeaux wine and water every thirty or forty minutes. On the very first day this mode of alimentation was begun his digestive troubles disappeared, and within a week he was so well that he returned to Paris, not, however, to go to work again, as he had been rendered wiser, but to prepare to go to the sea-shore. He continued the same mode of alimentation for about three weeks, and then gradually diminished the number of his homeopathic meals and increased the amount taken at each of them until in about eight or ten days he came to eat only three times a day, and a full meal at each time. His strength during the first week had become almost as great as it ever had been previous to his illness. Since that time his life has been one of great hardship, which he has borne remarkably well, and dyspepsia has only troubled him in a slight degree rarely and for short periods.

"The plan, as stated in the above case, consists in giving but very little of solid or fluid food or any kind of drink at a time, and to give these things at regular intervals of from ten to twenty or thirty minutes. All sorts of food may be taken in this way, but during the short period when such a trial is made it is obvious that the fancies of patients are to be laid aside, and that nourishing food, such as roasted or broiled meat, and especially beef and mutton, eggs, well-baked bread, and milk, with butter and cheese, and a very moderate quantity of vegetables and fruit, ought to constitute the dietary of the patients we try to relieve. This plan should be pursued two or three weeks, after which the patient should gradually return to the ordinary system of eating three times a day.

"It is hardly possible to give more detailed rules as regards this hygienic mode of treatment. On the one hand, I have found few persons willing or able to follow it fully. On the other hand, many patients, especially those who have no dyspepsia, do not need to take so minute an amount of food at a time. Besides, it is certain that the quantity of food required varies notably in different persons. Prof. John C. Dalton states that the entire amount of food needed by a man in full health and taking free exercise is: of meat, 16 oz. av.; bread, 19 oz.; fat, 3½ oz.; and of water, 52 fl. oz.; *i. e.*, about 2½ lbs. of solid food and rather more than 3 pints of fluid. According to Dr. Edward Smith and other European hygienists the amount of solid food and of water required each day is notably larger than that marked out by the able American physiologist I have named. My experience with the patients on whom I have tried the plan of feeding above mentioned shows that the amount of solid food required by an adult is nearly always as follows: from twelve to eighteen ounces of cooked meat and from eighteen to twenty-four ounces of bread. As regards the quantity of fluids I have allowed, it has always been notably less than the amount indicated by Dr. Dalton (three pints) and by Dr. E. Smith (four and a half to five pints).

"I hardly need say that in carrying out the plan I propose attention must be paid to three points: first, the liking and the disliking of certain things by the patient; second, the importance of variety in food; third, the digestibility of certain things compared with others, digestibility which varies immensely in different patients. When I found that there was no disgust for a meat-and-bread diet I ordered that roasted beef or mutton, with bread, be the almost only kinds of solid food taken. But most patients were either soon disgusted with this diet or refused even to try it. Having ascertained this, I allowed the selection by each patient of his own dietary, insisting, however, that the quantity of cooked meat should be at least twelve ounces a day. The most varied diet as regards the kind of food can be followed, however, under this plan as well as when one has only two or three meals a day. The only absolutely essential points are that the amount of food taken every ten, fifteen, twenty, or thirty minutes be very small (from two to four mouthfuls), and that the quantity of solid food in a day be from thirty-two to forty ounces, or a little less when, instead of water, the patient drinks beef-tea or milk.

"I will not enter into long explanations to show how a marked benefit or a cure can be obtained in functional dyspepsia, in anæmia, and other affections by this mode of alimentation. I will simply say that the facts I have observed agree with the view that we are naturally organized, like most if not all animals, to eat very frequently, and not, as we do, two, three, or four times a day. It seems certain from the facts I have observed that functional dyspepsia, when once it has begun (never mind by what cause), is kept up and increased by distention of the walls of the stomach. This fact is already well known, and physicians generally recommend that the quantity of liquid taken be very small, and that the solid food be as nourishing as possible, so that its bulk may be reduced, with the view of avoiding great dilatation by the fluid and solid substances introduced in the gastric pouch. But, although deriving some benefit from this diminution of distension, many patients continue to suffer who might be benefited or cured by the plan I propose.

"It may be asked if there is no danger that distension of the stomach by a full ordinary meal, after a patient has followed for two, three, or four weeks the plan I propose, would not be more difficult and a source of greater trouble than before that organ had been allowed to contract considerably during the time this plan has been pursued. Facts answer this question in a way that leaves no doubt. There has never been in the cases I have attended the least trace of an increased trouble due to that cause. Even those patients who have not derived benefit from my plan of alimentation, and among them two who had while following it more acidity and flatulency, have at any rate had no increased trouble after having given it up. It is probable that the good obtained from this plan in dyspeptic patients depends at first on the rest given to the irritated stomach, and subsequently on a great amelioration in the quality of the gastric juice.

"In anæmia and chlorosis, not complicated with dyspepsia, the advantage of this plan lies in the rapidity of the formation of blood from the notably increased amount of food that the patient can digest.

"I have made but very few trials—and incomplete ones—of this plan in cases of organic affections of the stomach. I can not but think, however, that it deserves being tried in most of such cases.

"Against the obstinate vomiting of pregnancy this plan has already been employed successfully by a number of physicians, and once by myself in a case in which many modes of medical treatment had failed."

THERAPEUTIC SUMMARY FROM THE RAVISTA CLINICA DE BOLOGNA.—*Carbolic Acid* has been praised in prurigo and pruritus, subcutaneously injected in doses of about one centigramme of the acid mingled with water. It has been used externally in acute articular rheumatism as a liniment mingled with linseed-oil. *Arsenic* has been recently recommended in cases of strumous enlarged glands of the neck, and also in pellagra. Inhalations of *Bromine* have been used in croup and diphtheritis; thirty centigrammes of bromine, thirty of bromide of potassium, and one hundred and fifty grammes of water are combined in a lotion, and a sponge imbibed with this fluid is placed before the patient's mouth for five or ten minutes every hour. *Bromide of Iron* is employed by some in cases of spermatorrhœa and involuntary seminal emissions, in doses of fifteen to twenty-five centigrammes occasionally, and, before the patient goes to sleep, in a dose of fifty centigrammes. *Bromide of Potassium* has recently been used in cases of the sickness of pregnancy and in cases of leucorrhœa, effecting cure in less than two months in the latter case. It is useful in summer diarrhea in infants, in doses of three centigrammes every two hours. *Bromide of Sodium* has a similar efficacy to that of bromide of potassium in epilepsy, and proved a cure in one case of tetanus. *Coffee* has been given in infusion in cases of infantile typhus fever. *Conium* has been used successfully in cases of mania, accompanied by muscular agitation. It acts on the motor center, sparing the sensory tracts. Of twenty-five patients treated by this substance twenty-two times the muscular agitation subsided. *Hydrate of Chloral* has been used in cases of nocturnal incontinence. *Chloride of Potassium* has been used instead of bromide in epilepsy, and it is asserted to be more efficacious; dose, 3.50 to 5 grammes a day. *Copaiba* has been recommended in certain cases of psoriasis. *Iodine* has been recommended in cases of nocturnal incontinence of the aged; one drop of the tincture every hour in water. The tincture has also been recommended in intermittent fever, in doses of ten drops, thrice daily. *Iodoform* is used in chronic venereal ulcers, and much praised as an antiseptic. *Iodide of Silver* is recommended in hooping-cough. *Koussine* is an excellent vermifuge, and is given in the morning in doses of 1.25 grammes in a little syrup. *Phosphorus* has been recommended in chronic skin diseases, in oil, or gelatine capsules, containing each from two to six milligrammes of phosphorus, in oil. Acne indurata, lupus, psoriasis, and scrofulous skin diseases have been cured by such means. (The Doctor.)

THE TREATMENT OF ANASARCA, ASCITES, AND OBSTINATE PLEURITIC EFFUSIONS BY MILK.—MM. Sirédey and Cordier (*Journal de Médecine et de Chirurgie Pratiques*) have used this old and rather favorite remedy against dropsies in a way which they consider renders it less troublesome and repugnant than the "milk-cure" is otherwise apt to be. At the same time that Sirédey prescribes two pints of milk a day to his patients he allows other kinds of food and drink. Cordier, in his thesis, cites cases of albuminuric dropsy in which the diuresis was rapid and considerable, and the dropsy disappeared under this treatment. The diet is otherwise moderate, including meat and a little wine. He does not give more than two or two and a half pints of milk, at convenient intervals, in the day. He prefers asses' milk.

Notes and Queries.

CHOLERA.—The first account of cholera that reached us from New Orleans a few months ago favored the idea of the domestic origin of the pestilence. The disease at last had seemed to spring up there *de novo*, and was not imported. But it is now confidently affirmed that two or three ships had arrived before the irruption of the epidemic from Russia and Rio Janeiro, by which the poison may have been introduced, and so doubt is thrown upon its origin in the city. That cholera may be developed out of Asia, however, is an opinion entertained by many of our ablest etiologists; and having once been brought to our shores, it is certainly quite possible that the germs or miasm engendering it may become naturalized and give rise to periodical outbreaks of the epidemic. A paper, by Dr. Estrazulas, in the American Journal of Medical Science for July, renders it highly probable that cholera arose in South America a few years ago independently of importation. That writer shows that the disease was not known in Paraguay or La Plata previous to 1866, when it broke out as an epidemic; that no case occurred before the armies camped there, and that the pestilence vanished with the removal of the troops; that the Paraguayan army, where the disease first appeared, was secluded from the rest of the world, and completely blockaded by land and water; and finally that no vessels from infected ports arrived at Paraguay or La Plata previous to 1866. But the point can not yet be regarded as settled, and dogmatic assertion is quite out of place where so many facts may be cited on both sides of the question. The steps of cholera are eminently stealthy, and its poison may exist and be carried about in fomites where there is no reason to suspect its existence. All know how difficult it is in many cases to account for the origin of small-pox, and yet no one doubts that this disease is always dependent upon the specific virus.

However cholera may have originated at New Orleans, its course after it appeared was that which it has uniformly taken, and which has given so much strength to the belief that it is a portable disease; that it follows the lines of human travel, and is carried about by men. It proceeded slowly up the Mississippi to Memphis, and then fell upon Nashville, whence it was radiated to many towns in Tennessee, Kentucky, and Alabama, along the river and the railroads. Nashville, as in all former visitations of the epidemic, suffered severely; no other city in the country up to this time has been visited by the pestilence in so aggravated a form. It is computed that a thousand have fallen victims to it in Nashville and in the county of Davidson during its prevalence. The mortality has also been great in Gallatin and at various points in Sumner County. One hundred and nine are reported to have died in the town and one hundred and forty in the county.

Following the railroad into Kentucky, it has prevailed successively in Franklin, Bowling Green, and Elizabethtown. In Franklin and the surrounding country the deaths before the disease subsided amounted to forty-seven. Proceeding east and south from Nashville it fell upon Lebanon, where it had evinced great malignity in its former visitations, and carried off thirty-four people, chiefly negroes. At Murfreesboro the number of deaths has been fifteen, nearly all negroes. It spread to Shelbyville, Huntsville, Chattanooga, and Birmingham, along the railways; and at the latter place, a town of recent origin and very rapid growth in Alabama, its ravages have been unusually severe. The pestilence has for the first time, we believe, penetrated into the mountains of East Tennessee, and prevailed with a good deal of fatality at Greenville, a few fatal cases having also occurred at Knoxville and some other points.

The towns in Kentucky on the Ohio have not escaped, and Paducah and Henderson have lost a number of their inhabitants, negroes, as every where else, being the greatest sufferers. Mt. Vernon, in Indiana, has been severely scourged. This is a cleanly town on the Ohio, and has one of the most elevated sites on the river between Evansville and Cairo. Nothing in its situation or sanitary aspect would have pointed it out as a place likely to invite the disease, and yet forty deaths occurred there in one week from cholera, while Cairo and Evansville were almost if not quite exempt from it.

Cases of cholera have been announced in various places north of Kentucky, as well as in some of the towns in the center and north-eastern parts of the state. The boat which brought the first cases up the river from New Orleans landed cholera patients at Cincinnati, and there have been almost daily reports of deaths from the disease in that city for two months past; but the extent of the epidemic has never been alarming, if indeed it is correct to speak of it as an epidemic where only a few deaths a day have resulted from it in a population of two hundred thousand. In the Ohio penitentiary, at Columbus, a number of the convicts have died from the disease. At Carthage, in Ohio, six deaths from cholera were reported on the 18th of July as having taken place in forty-eight hours. Union City, Tenn., on the Mobile & Mississippi Railroad, has experienced a sharp visitation of the pestilence; but it has nowhere assumed a more malignant type than at Louisiana, in Missouri, where eight deaths are reported as having occurred in four hours. It seems to have been scarcely less virulent at Prairieville and Troy, in the same state; but in all of these places its stay seems to have been very short.

The localizing or secondary causes of the epidemic have seldom been more strikingly exhibited any where than at Nashville during the late visitation. When it was raging with such mortality along the creek bottoms the elevated, best-ventilated quarters of the city were comparatively healthy. It is correct to say that the scourge was nearly confined to the outskirts and lower portions of the city. Edgefield, on the north bank of the Cumberland River, opposite Nashville, standing on a low, sandy plain, with wide, well-ventilated streets, and supplied with good cistern-water, reports less than twenty deaths from the epidemic.

The remark made by us a month ago in respect to the cholera now prevailing continues to be true: the disease shows little tendency to assume an epidemic form. In no city but Nashville, and in only a few smaller towns, has it exhibited that character; for although it lingered long in Memphis, and carried off many victims while it prevailed, it was hardly regarded by the citizens or the profession at any time as an epidemic. St. Louis has suffered but little from it. One week, in a mortuary list of two hundred and forty, not a case of cholera was included, and in a subsequent week only fourteen deaths were set down to that disease. In Cincinnati, as far as we are informed, the greatest mortality from the disease any day has been fourteen, and it is said to be declining there as at all the points where it has broken out. It has been the good fortune of Louisville again to escape the pestilence. A number of cases have been brought here, but the disease has not been propagated. Dr. Palmer reports two cases in another department of the Practitioner, and a third case followed close upon the heels of his second, in the same neighborhood; but since that time no new cases have been reported in the city.

The disease, at the same time, has exhibited generally its characteristic virulence wherever it has broken out. Thus at Cincinnati, where the cases have been few in proportion to the population, death in one instance is related to have followed the attack in an hour, and in not a few cases it took place in five, six, or seven hours. In one hundred and sixteen cases it ran its fatal course in less than twenty-four hours, and in twenty-five others ended in death in from twenty-four to forty-eight hours. In Louisville two or three of the few fatal cases had a duration of less than twelve hours. The first cases every where have been the most fatal, as has been remarked heretofore of cholera; for the reason, first, that the disease is most virulent at the beginning, and secondly, because the first cases excite no alarm and reach a fatal point before remedies are resorted to. After a time it grows less malignant, and people, being on their guard, attend to the earliest manifestations of the complaint.

It continues to be the uniform testimony of physicians that when the first symptoms are met with appropriate remedies cholera is altogether manageable, and hence the people are urged when the epidemic is imminent to provide themselves with an opiate, in some form, to be taken at once on the occurrence of diarrhea, before medical assistance can be secured. There can hardly be a doubt that the disproportionate mortality of the black population at all the points where cholera has prevailed this season is due largely to the fact that those ignorant people seldom apply to a physician until seized with cramps, when collapse is too often just at hand. They are not alarmed by the painless diarrhea, which in some instances precedes the more violent symptoms a day or two, and generally long enough for the effectual use of remedies if taken at this stage of the disorder.

We have not been able to find any thing new in regard to the treatment of cholera. The hypodermic use of atropia, which was resorted to in India long ago, and was repeated in St. Louis in 1866, has again been suggested, and it has also been proposed to introduce strychnine into the system by the same method in cases of collapse. For the rest, the utmost diversity of opinion prevails among practitioners. But nearly all are agreed that the disease can be averted if taken early, and that little can be done at a later stage. A singular confusion of ideas is exhibited by some with respect to the action of opium in cholera. In the premonitory diarrhea no other drug is so efficacious. In collapse it is nugatory, as are all other medicinal agents, and its use, if administered freely then, is attended with this danger—that, should reaction occur and the absorbents again become active, it may be taken into the circulation and give rise to fatal coma.

In regard to the efficacy of prophylactic measures in averting the epidemic, physicians are by no means agreed. Such cases as that of Mount Vernon are not easily reconciled with the theory that the disease only prevails where invited by filth, bad water, and insufficient ventilation. The learned editor of the Nashville Journal of Medicine is confident that the disease attacks none who abstain from fruits, vegetables, and animal products. His readers are promised a full exposition of his views and experience on the subject, which will be looked for with interest. If he can establish the dependence of cholera upon diet, he will do much to disarm the disease of its terrors.

It is pleasant to record that the profession every where has done its duty in the season of danger and alarm through which it has been passing in all but one instance—one doctor is said to have run away from Mount Vernon and left his patients when the epidemic was at its worst.

After the foregoing was in type the mortuary report of Louisville for the week ending July 26th announced two fatal cases of cholera, one originating in the city, the other contracted at Elizabethtown. The epidemic has also broken out at Lagrange, on the Lexington Railroad; but almost every where in this country and in Western Europe it is reported to be declining.

AN ELOQUENT TRIBUTE TO THE COUNTRY DOCTOR.—Dr. McClellan, in his most interesting paper, copious extracts from which we have made elsewhere, pays the following deserved tribute to the frontier doctor: "Of all our professional brethren, he who devotes himself to the relief of suffering humanity in frontier settlements surely earns the brightest crown. The remarks of the president of the American Medical Association, at its last meeting, on the 'pine-board hut' which served as home and office for the doctor of a Rocky Mountain railroad station, apply with equal cogency to hundreds of our profession. To our mind arises the face of a valued friend, a pupil of the illustrious Niemeyer, who devotes his life to an almost missionary work among the Mexicans. Separated from his home and kinsmen, undeterred by the pangs of hunger or fatigue, undismayed by the dangers of field or flood, by day and by night, he renders to the ignorant and superstitious inhabitants professional services which in older countries would secure to him the smiles of fame and fortune."

DR. M. H. HENRY, we are glad to learn, has been appointed by the commissioners of emigration surgeon-in-chief of the State Emigrants' Hospital, Ward's Island. Dr. Henry succeeds Dr. Carnochan, who has held this position for many years. The new incumbent is a gentleman of high standing and large experience in his profession. He served with distinction as a surgeon in the navy during the war, and as the editor of the Journal of Syphilography and Dermatology is well known to the profession throughout the country. A New York paper, speaking of the appointment, says: "Dr. Henry brings to his new position, which is one of great responsibility, an amount of talent, learning, and skill which are too often wanting in those who are called upon to serve the public in high places. The appointment is in every way one fit to be made."

THE UNIVERSITY OF MICHIGAN PURGES ITSELF—THE HOMEOPATHS BROUGHT TO GRIEF.—The friends of legitimate medicine every where will be gratified to learn that the homeopaths are not after all to hold professorships in the school at Ann Arbor. The legislature of the state of Michigan passed the law requiring the appointment of the "infinitesimals," but the board of regents declined to execute it. The supreme court of the state refused to grant a mandamus requiring the regents to comply with the law, whereupon the latter met and passed, with but one dissenting voice, the following very dignified and sensible resolution: "That we maintain the position heretofore taken, and decline to make the appointments required by law; that we do this in no spirit of factious opposition to the apparent will of the legislature, but because we believe the true and best interests of the university demand it; that we reaffirm the former action of the board expressing a willingness to take official charge of an independent school of homeopathy, and connect it with the university, whenever the means shall be provided for the payment of professors."

COLLEGE OF PHYSICIANS AND SURGEONS.—A medical society under the above name was recently organized in Little Rock, Ark., and the following officers elected: Dr. Geo. C. Hart, president; Dr. A. L. Breysacher, vice-president; Dr. E. V. Denell, treasurer; Dr. J. H. Lenow, secretary and librarian.

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The Functional Diseases of the Renal, Urinary, and Reproductive Organs, with a general view of Urinary Pathology. By D. Campbell Black, M. D., L. R. C. S., Edinburgh.

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* Any of these works may be procured on application to Messrs. John P. Morton and Company, Louisville, Ky.

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THE AMERICAN PRACTITIONER.

SEPTEMBER, 1873.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

A CASE OF GENERAL PARESIS.

BY J. B. STONEHOUSE, JR., M. D.,
Assistant Physician Sanford Hall, Flushing, New York.

Certain diseases—which indeed properly belong to the domain of the specialist, but are in the earlier stages, when a proper appreciation of the symptoms is of the greatest importance, in the hands of the general practitioner—are seldom spoken of in the text-books or by the college instructors, while the medical journals only at wide intervals refer to them. One of these, general paresis, is peculiarly liable to a mistaken diagnosis, with the consequent damage to the patient's chances of recovery: especially is this the case when the paresis precedes the development of the *psychical* symptoms. A recent writer (Guy's Hospital Reports, 1870) argues that cases occur outside of the hospitals for the insane which deserve the title of general paresis as fully as those within. In accordance with this view, and with the hope of presenting to the readers of the Practitioner in a small space a general idea of the disease, with the views thereon of the recognized authorities, this article has been prepared. The case reported is one which was at no time in an asylum, and is therefore chosen for the text.

M. H., merchant, aged forty-three years, single, of good habits and of previous excellent health. The first symptoms observed by him, and for which he sought the advice of a physician, were a feeling of fullness of the head, with vertigo, an inability to perform any severe mental labor, and loss of memory. Two months later mental symptoms made their appearance. Patient declared he was not fitted for his business, and would ruin his partners. He said it had been decreed by Providence that he should fail if he continued in the business. After much deliberation he concluded to change his occupation, and selected the popular lecture-field for his future operations, expressing great faith in his oratorical powers, and displaying all that wonderful train of mental symptoms usual in the "*délire des grandeurs.*" Even while making these assertions a peculiar trembling of the lips, "as if about to burst into tears" (Maudsley), often embarrassing his articulation very perceptibly, was noticed. This condition increased rapidly until he was unable to pronounce the *labials.* The right pupil was contracted;* paresis of the muscles of deglutition and expression soon took place; the use of the fingers, and later of the lower extremities, became impaired. A failure of muscular power, with considerable spasmodic action after continued effort to grasp the instrument, was shown by the dynamometer. Muscles of the extremities responded to the electric stimulus. He was unable to dress himself without great effort. His gait at this time was very similar to that observed in cases of sclerosis of posterior columns of the spinal cord. A spasmodic action of the pulse (which varied from 90 to 100 per minute) was exhibited by the sphygmograph. Ophthalmic examination was made only during the first stages of the disease, without revealing any lesions of the optic nerve. No convulsions, comatose attacks, or maniacal exacerbations occurred during the course of the disease. From the end of the third month his mental powers steadily diminished into a condition of dementia. Urine and fæces passed involuntarily, and the patient would remain in contact with them until the sense of smell informed him of his condition. At this time there was anæsthesia of the greater portion of the cutaneous surface and of the mucous membranes, as far as could be noticed. This condition was not complete in the axillary and inguinal regions. Extreme loss of memory was observable. He seldom remembered an extravagant idea longer than the time occupied in uttering it. When asked his own name, in the later periods, he could not answer. During a brief absence of the nurse from the room death occurred from impaction of food in the fauces, owing to anæsthesia of these parts. From the appearance of the first symptoms to the day of death was five months and fifteen days.

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* Hammond (Diseases of the Nervous System, page 369) quotes Austin (Pract. Acct. of General Paralysis, etc., London, 1859) as asserting that contraction of the right pupil is associated with melancholic delusions, and contraction of the left pupil with the more self-complacent fancies. This, however, can not be supported.

Among the points of interest noticed in this case are the following:

1. The short duration of so typical a case. Hammond gives the average duration as three years.

2. The absence of any definite cause. The patient, as we have before stated, was a man of excellent habits. He was an active and consistent temperance man. An inquiry as to his past history revealed the fact that several years before the attack, during which time he enjoyed very good health, the patient had been severely mercurialized during a course of treatment for some liver trouble. Could this have produced a condition of the nervous system inviting the development of the disease?

Synonyms. General paresis, general paralysis of the insane, paresifying mental disease, paresis generalis, insania paresans, dementia paralytica, anoia paralytica, geisteskrankheit mit paralyse, paralysie générale, aliénation ambitieuse avec paralysie incompléte, folie paralytique, délire des grandeurs.

As to the causation of general paralysis, no great certainty of opinion has been reached. Abuse of alcohol, the narcotics, etc., venereal excesses, and many other habits and conditions have been charged with the production of this disease. Many cases occur, however, which can not be traced to this class of causes. The disease is comparatively rare among women. France gives a much larger proportion of cases than any other nation. Saloman ascribes to the female cases the depressed form of mental symptoms. In general paresis no order of symptoms is a typical one. The mental or physical symptoms may appear first, or they may be simultaneous. Parchappe reports that in eighty-six cases fifty-one were marked by the simultaneous appearance of the mental symptoms and paresis; in twenty-seven cases the paresis was subsequent, and in eight the precedence could not be determined. Leidesdorf relates the history of a case in which the earliest symptoms were spinal. On this point Maudsley says: "Before asserting in a particular case that there is no evidence of paralysis, it will be well to observe the patient when emotionally excited, or after a sleepless night; then there may be exhibited a tremulousness about his speech which is not at all visible when he is perfectly calm and collected." Forbes Winslow (Obscure Diseases of the Brain and Disorders of the Mind) says, speaking of the peculiar mental symptoms of the disease: "I have known the tendency to distort facts and look extravagantly at the bright side of every thing through an intensely magnified and highly-colored, because morbid, medium to exist for five or even ten years before the mind presented any decided and recognized symptoms of alienation." M. Parchappe, in an address before the Medico-

Psychological Society of Paris, 1858, says: "Mental disorder is constant from the first, at least under the form of impairment of the memory and judgment, and very frequently under that of maniacal or melancholic excitement."

The testimony of these quotations shows how difficult is not only the decision of the precedence of the symptoms, but also the diagnosis of the disease. The mental symptoms are ushered in by a stage of melancholia; but even this bears on the exaggeration of the *ego*—the patient is boastful of bodily ailments or persecutions. Gradually the ideas become more of the *ambitieux* type; an exaggeration of all that is favorable in the man or his life, and a new and falsely-colored representation of what is unworthy. With continued loss of memory we find a diminution in the coherence of ideas, until in the later stages there is observed merely the utterance of disconnected egotisms and optimisms. Finally these psychical symptoms are not, according to some authorities, characteristic of the disease. M. Trélat (*Annales Medico-Psychologiques*, 1855) writes: "A great number of paralytics have no ideas of riches or greatness. There are some who, instead of being powerful, happy, and full of confidence, are timid, distrustful, and agitated by hypermaniacal ideas." M. Laséque (thesis on his examination for a fellowship, quoted by M. Arch Foville, jr., Quarterly Journal of Psychological Medicine, New York, April, 1872) says "the characteristic delirium may be wanting in spite of the intellectual disturbance." And again M. Linas (quoted by the same authority) declares "he could not raise his voice too energetically against the opinion which assigns to general paralysis a definite delirium."

Among the first physical symptoms calling for medical treatment may be apoplectiform or epileptiform attacks and signs of cerebral congestion. The difficulties of articulation are usually among the earlier symptoms. Articulation becomes thick and labored and loses distinctness and precision.

Especial difficulty is experienced in the pronunciation of the labials. In the last stages "it consists only in the muttering of thick, indistinctly-articulated noises." Saloman (translated by Moore and quoted by Delayé) accounts for this condition by the "transient convulsive movements (involuntary spasms) of the muscles of the face, especially of the upper lip," and "fibrillar convulsions in the muscles of the tongue." The pathology of this condition is the implication of the anterior lobes in the degeneration, whether such changes be considered, with Parchappe, a cerebral softening (Medico-Psychological Society of Paris, 1858), or Delayé, a molecular change of the cerebral tissue, especially of the gray substance (*De la paralysie générale incompléte, Thèse de Paris*, 1822), or Bayle, a meningitis (*Recherches sur les Maladies Mentales*, Paris, 1822), or Behomme (quoted by Parchappe), a meningo-cerebritis, or Calmeil, a chronic diffused peri-encephalo-meningitis (*De la paralysie considerée chez les Aliénés*, Paris, 1822).

It is of importance to remember that the condition of the limbs is not one of palsy, where the muscles refuse to respond to the mandate of the nervous centers; but, as the late Dr. Skae, of the Morningside Asylum of Scotland, states it (Edinburgh Medical Journal, April, 1860), "the volition is irregularly conveyed and distributed. The person can not control and direct his movements perfectly and consentaneously, just as a drunken man sees double because he can not converge upon a given object, or walks unsteadily because he can not direct and regulate the harmonious movements of his limbs." Dr. Reynolds, in his treatise on wasting palsy, states the means of diagnosis between general paresis and wasting palsy to be that in general paresis the muscles respond to the electrical stimulus, and in wasting palsy they do not. The functions of sight and hearing are not in ordinary cases involved except in the last stages. Smell and taste are much oftener affected, so that, according to Saloman, "the patient submits to their operation the most loathsome things." Hallucinations (endogenous sensations) are not unfrequently met with in sight and hearing. Hyperæsthesia and anæsthesia of the skin and mucous membranes are occasional but not essential symptoms of the disease. M. Parchappe noticed a slight increase of the frequency of the pulse in general paresis, although the disease, except accidentally in the state of congestion, is not accompanied by a true febrile movement. In the last stage, a condition called by M. Parchappe "cerebral marasmus," in which occur pyæmia, pneumonia, colliquative diarrhea, gangrenous destruction of tissue from effects of pressure, terminates the sad history. All these symptoms are subject to ameliorations, which to the inexperienced lend false hopes of recovery.

The prognosis is always *unfavorable.* Parchappe says: "I have not obtained a single positive and certain cure." Dr. G. Mackenzie Bacon (Journal of Mental Science, London, July, 1871) declares: "Whatever the hopes of the therapeutics of the future, I can see no reason to wander through the pharmacopœia in search of a drug to cure a disease which depends essentially on structural changes, when we know that these, at least in the brain, are not remedied by medicines."

In the treatment of general paresis, tonics and stimulants are always of use, with sedatives or narcotics when necessary.

Parchappe, as a fair exponent of the French alienists, says of the pathology of the disease: "In the majority of cases the softening (which he considers the characteristic lesion) is found at the surface on the free margin of the convolutions. At a later period it often attacks the gray matter of the corpora striata, optic thalami, medulla spinalis, and cerebellum. Mental disorder, under the form of mania or melancholia, coincides with the superficial alteration of the cortical substance; the paresis and dementia is connected with the deeper alterations, the difficulty of speech with the lesion of the anterior lobes. A greater degree of softening is often found on one side, then the paresis is more determined on the other." In America the only investigations of importance have been begun at the New York State Asylum, by its special pathologist, Dr. E. R. Hun, of Albany, N. Y. In his last report he speaks of the autopsies in cases of general paresis: "Of the eight cases of general paresis six were men and two women, the oldest sixty-four and the youngest thirty-three years of age. In five cases there were eschars or ill-conditioned ulcers observed upon the surface of the body; the skull-cap was unusually thick in four cases; the membranes were adherent to each other in four cases; the arachnoid opaque in four and congested in one; a considerable amount of sub-arachnoid serous effusion was noticed in seven of the eight cases, and in two cases clots of blood were found upon the surface of the brain. In six of the eight cases there was more or less atrophy of the cerebral convolutions, and in one case embolism of the middle cerebral artery was accompanied by softening of the hemispheres. In this case two small cysts filled with clear serous fluid were found encroaching upon the brain substance. The weight of the encephalic mass (including cerebrum, cerebellum, pons, and medulla) was taken in three cases; the heaviest weighed 48¼ ounces and the lightest 35¼ ounces, the average weight being 43⅓ ounces. In five of the cases there was existing tubercular disease, or evidences that such disease had formerly existed, as shown by cicatrices and cretaceous deposits in the lungs. In one case ossification of the mitral valve was found, and in three was marked deflection of the transverse colon toward the symphysis pubis."

FLUSHING, N. Y.

CHANGES OF TEMPERATURE AND PULSE IN YELLOW FEVER.

BY JOSEPH JONES, M. D.,

Professor of Chemistry and Clinical Medicine, Medical Department University of Louisiana; Visiting Physician of Charity Hospital, New Orleans, La.

Owing perhaps chiefly to the sudden origin, rapid progress, and singularly fatal nature of yellow fever, as well as the infrequency of the use of the thermometer in the investigation of the disease, but few facts of value relating to the definite degrees of temperature in the different stages of the disease can be found in the writings of various observers. Almost all observers, however, as Benjamin Rush, J. Deveze, Wm. Currie, C. Caldwell, Samuel Jackson, P. Chas. A. Louis, W. Arnold, R. Jackson, Lionel Chalmers, John Lining, A. M. F. Savarésy, William T. Wragg, Daniel Blair, John Davy, Schmidtlein, and many others, concur in the statement that in the early stage of reaction or febrile excitement the temperature is elevated to a greater or less degree, in different cases, above the standard of health; and still further, that this elevation of temperature is not permanent, but at the end of from two to five days, in most cases, is succeeded by a decided fall; and, although the symptoms may be of the gravest character and the patient *in extremis*, neither the elevation of the temperature nor the frequency of the pulse give any true indication of the danger.

The general results of my investigations upon the changes of temperature and conditions of the pulse in yellow fever may be formulated thus:

The maximum elevation of temperature is attained upon the first, second, and third days of the disease; ranging, according to the severity of the attack, from 102° to 110° in the axilla; and, as a general rule, from the third to the fifth day steadily falls and sinks down to the normal standard, and even below. In some fatal cases it rises again toward the end, rarely, however, reaching or exceeding, during the stage of passive hemorrhages, black vomit, jaundice, and urinary suppression, 104°; and, as a general rule, never attains the high degree of temperature characteristic of the first stage. The supervention of an inflammatory disease, or the occurrence of an abscess, or the access of malarial fever, after the first stage, may in like manner cause a progressive elevation of temperature, with slight evening exacerbations.

The pulse at the commencement of the attack is rapid and full. The frequency of the pulse does not, however, as a general rule, continue to correspond with the elevation and oscillations of temperature, as in many other febrile diseases; and in many cases the remarkable phenomenon is witnessed of the pulse progressively decreasing in frequency, and even descending below the normal standard, while the temperature is maintained at an elevated degree; and on the other hand the pulse frequently increases in frequency, but diminishes in force, near the fatal issue. The occurrence of copious hemorrhage from the stomach or bowels may be attended with sudden depression of temperature, and increase in frequency but diminution in the force and fullness of the pulse.

The remarkable progressive decrease in the beats of the pulse after the first stage in many cases appears to be due to several causes; as the anatomical changes in the heart (acute fatty degeneration), and the retention in the blood of the bile and urinary constituents.

If the temperature rises in the first stage above 105°, the the patient is in imminent danger; and if it reaches from 107° to 110°, death is inevitable, whatever may be the treatment adopted. In cases attended with the rapid rise of the temperature to 106° and beyond in the first stage, death sometimes occurs suddenly, and apparently solely from the effects upon the blood and nervous system of the great elevation of temperature, as in sunstroke. The truth of this statement will best be illustrated by actual observations, and especially by the following case, which has recently occurred in my private practice.

Mrs. W., aged twenty-eight years, has resided in New Orleans eighteen months; large, well-developed, with clear complexion and high color in health. Mrs. W. called at my office July 21st, stating that she had just passed through the menstrual period, which had been protracted for ten days, was very profuse, and had confined her to bed. She complained of great weakness, "heaviness" of feeling, vertigo, and pain in the head, back, and limbs, symptoms which appeared to be attributable, at least in part, to the hemorrhage, as I had attended her upon previous occasions when analogous symptoms resulted from profuse menstruation.

July 22d, 1 P. M., I was called to Mrs. W., and found her suffering with slight febrile excitement; pulse 90, full and strong; face flushed; pain in head, back, and limbs.

July 23d, 9 A. M.—Face greatly flushed and of scarlet hue; capillaries of the extremities and face and surface generally congested; patient greatly agitated and alarmed; says she has yellow fever, and will surely die. It was difficult, if not impossible, to calm her fears. Skin warm, but bathed in profuse perspiration; pulse 108, full and strong; great pain in back and head. 3:30 P. M.: Pulse 110; temperature 103.5°; urine abundant, light-yellow, slightly turbid from presence of vesical and vaginal mucus; a trace of albumen. Menstrual flow returned for an hour or two during the morning, but ceased again; capillaries of the surface intensely congested; tongue red at tip and edges, furred in center.

July 24th, 9 A. M.—Pulse 118, respiration 30, temperature 106.8°; skin hot and dry. The fever rose in the evening; patient talked and muttered in her sleep, and frequently awoke suddenly with a start and cry; moans and sighs with every breath; is greatly agitated and alarmed; declares the case is utterly hopeless, and that her lower extremities feel as if they were paralyzed. Pain in head, back, and limbs intense; nausea constant and distressing, but no vomiting; heavy, disagreeable odor emitted by the body, as in yellow fever; great congestion of capillaries; face and hands of a scarlet hue; an eruption has appeared upon the forehead; the surface of the face, trunk, and extremities is as highly injected and as red as in scarlet fever or measles, but the brilliant redness is more uniformly diffused over the surface than in either of these diseases. Urine abundant; light-yellow color; specific gravity 1020; contains a small amount of albumen, with detached cells from the tubuli uriniferi and yellow granular casts, together with vesical and vaginal epithelium. Upon standing the urine let fall a moderate deposit of urates of ammonia and soda, mingled with the cells and casts. 3 P. M.: Pulse 108, respiration 36, temperature 106.2°; skin hot and dry; face and surface generally of a deep-scarlet hue; pressure drives out the blood from the capillaries and leaves a white spot, into which the blood slowly returns. Tongue coated in center, with yellow fur and red at tip and edges; swollen, with margins indented by the teeth; moist and soft. Nausea, depression, fear of death, and bad odor from the body unchanged. 9 o'clock P. M.: Pulse 112, temperature 106.2°, respiration 38; moans and sighs with every breath; when spoken to answers rationally, but often slumbers, starts, and jumps in a delirious, nervous manner; odor from body heavy and offensive.

July 25th, 10 A. M.—Condition unchanged; pulse 118, full and strong; respiration 36; temperature 108°. The delirium and restlessness of the patient prevented the thermometer being held well in the axilla; the actual temperature was therefore somewhat above 108°, and probably reached from 110° to 113° in the cavities of the heart. Conjunctivæ congested; gums red and spongy; odor of body very offensive; surface of face, trunk, and extremities greatly congested and of a brilliant scarlet hue; forehead covered with a distinct papular eruption. Urine light-colored; specific gravity 1020; contains albumen in considerable amount, numerous granular casts of tubuli uriniferi, kidney cells, granular yellow albuminoid matters, and amorphous deposits of urates of ammonia and soda. Two hours after I was summoned to the bedside of the patient, and found her in *articulo mortis.* I was informed that she had started suddenly in a disturbed sleep, made several ineffectual efforts to vomit, and passed immediately into this state. She was unable to swallow. Sinapisms were freely applied, but without effect.

The treatment of this case will be briefly mentioned, although we are not now engaged with this subject. The bowels were first opened with a saline cathartic, followed by quinine. Rest was then promoted by Dover's powder. The bowels were afterward kept open by means of enema. The diet was light but nutritious, and administered in small quantities at regular intervals; the action of the kidneys was promoted by the use of gentle diuretics, as orange-leaf tea and water charged with carbonic-acid gas. Quinine aggravated the delirium, and was abandoned at once. Alcoholic stimulants were found in like manner to aggravate the pain in the head, the nervous excitement, and delirium. Cold wet cloths were applied to the head, and the surface bathed with tincture of camphor and water.

In the last moments of life the scarlet flush of the surface gradually faded, and at the moment of death, which occurred at 1 P. M., the surface presented a yellow, jaundiced hue; after death body mottled; decomposition rapid. I attributed the death of this patient to the high degree of heat and the consequent disorganization of the blood and derangement of the nervous and muscular forces consequent upon the action of the febrile poison.

The fullest and most reliable observations on the pulse in yellow fever with which we are acquainted are those given by Daniel Blair in his "Account of the last Yellow-fever Epidemic of British Guiana," third edition, London, 1852. According to this accurate observer, the pulse was rarely very quick during any period of the disease. It was highest in the first stage, and gradually declined in frequency. Before death it generally became quicker and smaller, and when much fluid ejections occurred it became extinct at wrist many hours before death. During convalescence the pulse was uniformly slow when no complication existed. "The pulse was quickest in the cerebral variety. In some cases, when the disease determined to the intestines, the pulse became startlingly slow, even on the second day of the disease; thus in Mr. Mackae's case it was 48; he recovered. In case 2895 of Seaman's Hospital, the pulse on the sixth day of fever was 24. The insidious nature of some of the attacks (when the seat of the malady was the intestinal, urinary, or pulmonary apparatus), the perfect ease of the patient, the external air of good health, and the *solemnity of the pulse* in such cases frequently inspired the practitioner with a kind of awe and horror of the new, treacherous, and remorseless malady. In some cases of our late yellow fever it seemed as if the poison acted directly and at once as a sedative on the heart, and in some cases there seemed a sudden and temporary excitability of it, which must have been favorable to the production of fatal local congestions."

The average pulse on the first day of the disease, in one hundred and twenty-one cases, was 97.40; of three hundred and thirty-eight cases, on the second day, 90.80; of four hundred and six cases, on the third day, 83.53; of three hundred and eighty-eight cases, on the fourth day, 80.44; of three hundred and eleven cases, on the fifth day, 78.56; of two hundred and six cases, on the sixth day, 78.74; of one hundred and twenty-five cases, on the seventh day, 78.78; of seventy-one cases, on the eighth day, 75.62; of forty-six cases, on the ninth day, 75.76.

Dr. Blair gives striking examples of the sudden rise or fall of the pulse; thus in one case it rose from 72 in the morning of the third day to 120 in the afternoon; in another, from 112 in the morning to 156 in the afternoon of the fourth day. In one case the pulse fell from 108 in the morning to 54 in the afternoon, and in another from 120 in the morning of the fifth day to 80 in the afternoon. These remarkable differences in the pulse are said by Dr. B. to be rarely accompanied by corresponding febrile exacerbations. There is also, he adds, great irregularity in surface temperature in yellow fever. Sometimes the forehead is the hottest part of the body, and occasionally the cheek. Uncovered portions of the body in the latter stages are easily reduced in temperature; and thus while the exposed chest and extremities may feel cool to the touch, the axilla may raise the thermometer to 102° or 103°. The highest temperature observed by Dr. Blair was 107°. He established the remarkable slowness of the pulse during convalescence from yellow fever by a careful comparison of its rate in convalescence from various other diseases.

Dr. John Davy remarks upon the preceding observations that "slowness of pulse in connection with certain diseases of the abdominal viscera, not of an inflammatory kind, is worthy of remark. Jaundice is a striking instance of the kind. Less marked ones are met with in cases of functional derangement of the primæ viæ, though not without exceptions. . . . Unusual slowness of pulse was often observed in the yellow fever of Barbadoes, and commonly accompanied with undue coolness of skin, especially in the extremities. It was a remarkable feature of the disease after its first invasion, the time varying in different cases."

The following table contains the results of my own observations upon the pulse and temperature in yellow fever, consolidated with those of several other observers; viz., W. Arnold, M. D., Charles Faget, M. D., Just. Touatre, M. D., and Dr. Thos. Layton. My thanks are especially due to my distinguished confrère, Dr. Faget, for the opportunity of examining the thermometric records preserved by Drs. Touatre, Layton, and himself during the epidemic of 1870.

TABULAR STATEMENT OF THE VARIATIONS OF THE PULSE AND TEMPERATURE IN YELLOW FEVER.

No. Case..	Temp. and Pulse	Day of Disease.										Result and Remarks.
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
1	Pul.	108	118	118	....	....	....	....	....	....	....	Death on 3d day.
	Tem.	103.5	106.8	108	....	....	....	....	....	....	....	
2	Pul.	110	110	108	100	....	120	....	....	....	....	Death on 9th day.
	Tem.	108	108	108	108	110	110	110	....	100	....	
3	Pul.	120	120	....	....	....	....	....	....	....	....	Death on 17th day.
	Tem.	108	108	108	108	109	110	110	....	110	100	
4	Pul.	....	110	90	....	96	....	....	....	....	..	Death on 11th day.
	Tem.	....	106	107	108	....	108	110	....	110	98	
5	Pul.	110	110	....	....	....	....	....	....	....	....	Death on 7th day.
	Tem.	107	108	....	....	....	....	....	....	....	....	
6	Pul.	100	....	120	....	....	....	....	....	....	....	Death on 3d day.
	Tem.	107	108	109	....	....	....	....	....	....	....	
7	Pul.	....	110	100	140	....	....	....	....	....	....	Death on 6th day.
	Tem.	....	109	109.5	....	110	....	....	....	....	....	
8	Pul.	100	96	....	90	100	100	....	....	....	....	Recovered.
	Tem.	....	105	105.5	....	....	100	....	....	....	....	
9	Pul.	110	100	....	120	120	126	....	....	....	....	Death on 6th day.
	Tem.	109	....	....	....	100	....	....	....	....	....	
10	Pul.	90	85	90	85	....	....	....	....	....	....	Death on 4th day.
	Tem.	108.5	....	....	....	....	....	....	....	....	....	
11	Pul.	100	90	86	86	80	86	....	....	....	....	Death on 8th day.
	Tem.	107	....	....	107	....	....	....	....	....	....	
12	Pul.	....	110	100	90	110	90	....	....	....	...	Recovered.
	Tem.	105	105	105	104	104	100	....	....	....	....	
13	Pul.	....	....	100	....	....	....	....	....	....	....	Recovered.
	Tem.	....	105	100	....	....	....	....	....	....	....	
14	Pul.	118	90	80	76	70	68	60	....	....	...	Convalescent on 5th day.
	Tem.	103.5	101.9	101	99.4	99.4	98.8	98.8	....	....	....	
15	Pul.	118	110	78	70	70	68	60	....	....	....	Convalescent on 4th day.
	Tem.	103	101.4	100	99	99	99	99	....	....	....	
16	Pul.	116	82	84	82	78	76	80	74	60	64	Case protracted on account formation parotid abscess; recovered.
	Tem.	103.2	101.8	101.8	101.6	101.6	101.6	102.2	100.8	101.2	99.2	
17	Pul.	86	62	70	60	60	....	....	....	....	....	Convalescent on 5th day; veratrum viride rapidly reduced pulse.
	Tem.	104	101.2	101.2	100.2	99.2	....	....	...	....	....	
18	Pul.	102	94	88	80	....	....	....	....	....	....	Convalescent on 4th day.
	Tem.	104.4	100.6	99.4	99	....	....	....	....	....	....	
19	Pul.	126	100	90	94	84	80	....	....	....	....	Death on 6th day; male, aged 67 years.
	Tem.	104.6	104	102.2	102.2	100	99	....	....	....	....	
20	Pul.	110	75	60	....	....	....	....	....	....	....	Male child; convalescent on 3d day.
	Tem.	104.5	101.4	100.4	....	....	....	....	....	....	....	
21	Pul.	120	106	90	82	92	110	90	80	70	100	Adult male; on 3d day abscess of elbow commenced; convalescent on 7th day.
	Tem.	104.4	103.5	103.6	104.9	104.8	102.8	101.5	101.2	101	100.8	
22	Pul.	120	80	62	80	70	70	70	70	....	....	Veratrum viride in 20-drop doses rapidly reduced pulse; convalescent on 7th day.
	Tem.	105	101.2	100.4	101.8	99.5	99	99.5	99	....	....	
23	Pul.	120	112	110	76	76	....	....	....	....	....	Adult male, aged 63 y'rs; died 5th day of disease.
	Tem.	105.8	105	104	100.4	98.5	....	....	....	....	....	
24	Pul.	....	100	86	80	70	70	....	....	.. .	....	Male child; on 4th day an attack of indigestion caused rise in temperature; convalescent on 6th day.
	Tem.	....	101.8	100	100	99	98.8	....	....	....	....	

No. Case..	Temp. and Pulse	Day of Disease.										Result and Remarks.
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
25	Pul.	122	110	102	100	130	....	....	....	....	....	Death on 15th day.
	Tem.	102.2	103.2	101.9	100.1	100.9	....	....	....	....	....	
26	Pul.	150	120	100	90	88	100	70	84	....	....	An eruption of urticaria appeared on 5th day and caused oscillation of temperature; convalescent on 7th day.
	Tem.	103.4	104	102.5	102.2	101	101.4	100.2	100	....	....	
27	Pul.	....	110	98	84	80	80	76	....	....	....	Male, aged 31; convalescent on 7th day.
	Tem.	....	104	103.5	102.4	100.8	100	98.8	....	....	....	
28	Pul.	110	80	94	82	98	....	....	....	....	....	Adult male; black vomit on 4th day; death on 5th day.
	Tem.	103.8	104.5	103	101.8	101.8	....	....	....	....	....	
29	Pul.	110	100	84	90	92	90	80	104	114	114	Adult male; death on 10th day. On 9th day temperature fell rapidly from 102.2 to 98.5, when pulse increased to 114.
	Tem.	103.8	104.4	103.7	103.6	102.2	101.8	102.2	102.2	102.2	98.5	
30	Pul.	118	116	104	100	98	100	....	....	....	....	Adult male; died on 7th day.
	Tem.	104.2	105.2	104.3	104.2	103	102.8	....	....	....	....	
31	Pul.	72	68	68	72	64	52	48	48	....	....	Male, aged 19; jaundice on 3d day; convalescent on 9th day.
	Tem.	101.3	102.2	101	101.5	99.8	100	99.8	99.3	....	....	
32	Pul.	108	100	108	94	80	70	70	60	50	44	Male, aged 23; convalescent on 7th day.
	Tem.	Fev.	102.2	103.8	102.2	100	100.4	98.5	96.8	96.8	....	
33	Pul.	....	....	110	90	74	76	64	....	....	....	Female child; convalescent on 7th day.
	Tem.	Fev.	Fev.	104.5	102.6	102.8	100.8	99.6	....	....	....	
34	Pul.	130	120	110	100	84	....	....	....	....	....	Female; convalescent on 5th day.
	Tem.	102.2	104	104.6	102	99.4	....	....	....	....	....	
35	Pul.	....	114	113	105	70	63	105	105	112	136	Adult male; jaundice on 4th day, black vomit on 6th, and death on 11th. After the supervention of black vomit pulse increased in frequency.
	Tem.	Fev.	103.6	101.8	104.2	103	100.2	101.6	101.3	99.2	99.8	
36	Pul.	....	120	100	90	74	72	68	78	90	80	Adult male; convalescent on 10th day.
	Tem.	Fev.	105	105	103	102	102	101.5	102.8	101.1	100.2	
37	Pul.	....	108	90	80	62	60	60	59	50	50	Male, aged 27; convalescent on 8th day.
	Tem.	Fev.	105.8	105.9	101.9	103.4	101.5	100	99.8	99.6	100.5	
38	Pul.	116	100	92	100	....	....	....	....	....	....	Male, aged 22; temperature fell from 106.5 on 3d day to 101.5 on 5th day: death on 5th day.
	Tem.	106.5	106.5	105	101.6	....	....	....	....	....	....	
39	Pul.	....	85	96	110	....	....	....	....	....	....	Male, aged 35; jaundice and black vomit preceded death. Temperature fell from 106.5 on 3d day to 99.2 on 4th, day of death: pulse, on other hand, rose from 84 to 172.
	Tem.	Fev.	105.9	106.6	100	....	....	....	....	....	....	
40	Pul.	....	112	104	100	80	80	80	74	74	74	Male, aged 20; jaundice on 5th day; pulse became slow, but temperature rose above normal standard; convalescent on 14th day.
	Tem.	Fev.	101.8	104	104	102.7	102.6	102.2	101	102.6	101.2	
41	Pul.	90	70	84	64	70	70	60	50	44	....	Male child; under veratrum rapid fall in the pulse; convalescent on 10th day.
	Tem.	103	102	101.6	104.4	103.8	102.5	101	99.8	99	....	
42	Pul.	....	100	85	94	83	84	84	....	....	....	Female, aged 15; temperature was elevated on 4th and 5th days; convalescent 8th day.
	Tem.	Fev.	106	102	105	104.5	103.7	100	....	....	....	
43	Pul.	98	80	76	70	74	84	108	....	.	.	Male, aged 40; jaundice 3d day; pulse depressed during jaundice. Temperature fell from 105 on 3d day to 100.2 on 7th, day of death.
	Tem.	105.1	105.2	105	103.4	102.2	101.2	100.2	. .			

No. Case...	Temp. and Pulse	DAY OF DISEASE.										RESULT AND REMARKS.
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
44	Pul.	....	112	110	108	96	86	69	76	80	68	Male, aged 32; jaundice and hemorrhage from kidneys; convalescent on 9th day.
	Tem.	Fev.	105	104	102.2	102	102	101	101	99.2	99.8	
45	Pul.	....	....	....	82	82	85	80	80	....	....	Male, aged 37; jaundice 3d day; urine loaded with albumen; convalescent on 7th day.
	Tem.	Fev.	Fev.	Fev.	100	100	100	98	98	....	....	
46	Pul.	....	....	....	....	....	130	140	....	....	....	Progressive diminution of urinary excret'n: death.
	Tem.	Fev.	Fev.	105	104	104	102.5	103.5	....	....	....	
47	Pul.	...	....	80	72	80	80	....	....	....	....	Black vomit, jaundice, and urinary suppression; death on 7th day.
	Tem.	Fev.	Fev.	101	101	100.8	101	....	....	....	....	
48	Pul.	....	....	84	92	80	....	....	....	....	....	Black vomit, jaundice, and urinary suppression; death on 6th day.
	Tem.	Fev.	Fev.	100.5	101	100	....	....	....	....	....	

It will be seen from the preceding table that an elevation of temperature above 106° in yellow fever was invariably followed by death. In this fact we have a powerful argument for the constant employment of the thermometer in the investigation of the phenomena of this disease, as affording sure grounds not only for prognosis but also for treatment.

In those cases attended with great elevation of temperature the excessive heat should be diminished by those measures which reduce the action of the heart, promote free perspiration, and directly reduce the heat of the surface. The most efficient remedies for this purpose appear to be veratrum viride and sponging the surface with water, or with water, acetic acid, and alcohol, and blood-letting. It appears also that an active purgative, either calomel or castor-oil, followed immediately by one or two full doses of quinine in the first twenty-four hours of the fever, produces beneficial effects in unloading the portal system, and in controlling to a certain extent the production of animal heat.

The profession needs accurate records of the thermometric changes as influenced in the early stages of the disease by the above measures. The preceding table also illustrates the fact that jaundice, urinary suppression, and black vomit are often accompanied by a slow pulse and but moderate elevation of temperature. If the thermometric changes of yellow fever be projected upon a chart, and a comparison instituted with the thermometric changes in other diseases, it will be observed that the former more nearly resemble the rapid rise and fall of temperature observed in varioloid, without secondary fever, mild scarlatina, and simple, uncomplicated pneumonia, which runs its course without fresh accessions of inflammatory action, while on the other hand they differ materially from the rapid and oft-recurring elevations and depressions of temperature characteristic of the various forms of paroxysmal malarial fever.

The cause of the rapid rise and fall of the temperature in yellow fever must be sought chiefly in the changes in the blood, and in those organs upon which the circulation and integrity of the blood depend. Neither the rapid rise nor fall of the temperature can be referred wholly to the effects of the poison upon the nervous system.

While it must be admitted that the experiments of Chossat, Brodie, Nasse, Claude Bernard, Brown-Séquard, Budge, De Ruyter, Waller, Schiff, Naunyn, and Quincke, and the experiments of Tscheschichin, in which division of the medulla oblongata near its junction with the pons caused a remarkable elevation of temperature from 102.92° to 108.68°, and finally convulsions and death; and a large number of pathological observations, in which most remarkable variations of temperature accompany profound alterations and disturbances of the nervous system, without corresponding changes in the respiration and circulation, sustain the theory of *centers of control*, which have their seat in the brain, and which regulate the activity of the spinal cord (when they are destroyed the activity of the spinal cord being morbidly increased, as manifested by increased reflex action, quickened respiration, acceleration of the cardiac systole, and increased animal heat), and that a great part of the pathological phenomena of warmth may be only the expression of the action of the *vaso-motor* nerves;

and still further, that the integrity of the central parts of the central nervous apparatus is more necessary for the regulation of animal heat than that of any other parts of the body. On the other hand, Breuer and Chropak, after an investigation of the question whether the nerves of a part supply elevation of temperature in an inflamed part, by means of experiments on animals, in which they have as far as possible divided all the nerves of one part of the body, think themselves justified in concluding that the force of the traumatic inflammation is independent of the nervous connections of the inflamed part with the nerve-centers; and by an extended series of observations* I have established the fact that in hospital gangrene and pyæmia the elevations of temperature are independent of the local lesions of the structures, and are coincident with the introduction of the gangrenous and pyæmic poisons into the blood, are intimately associated with the changes of the blood and urine, and are invariably accompanied by increased amounts of such constituents as urea, phosphoric and sulphuric acids; and even the traumatic fever accompanying gun-shot wounds arises from the introduction of inflammatory products into the blood, and depends not so much upon the extent and nature of the wounds as upon the state of the solids and fluids at the time of the injury, and upon the character of the inflammatory products absorbed into the circulation. Even in such inflammatory diseases as pneumonia, attended with extensive tissue change, the introduction of certain inflammatory products into the blood must more or less influence the production of high temperatures.

It is well known that some of the most violent poisons during their direct action upon the nervous system are unattended with elevations of temperature, while on the other hand putrid matters, pus, and certain animal secretions, as the poison of the rattlesnake and copperhead, induce profound alterations in the blood, attended with the most marked variations of temperature; and in the latter class of poisons the phenomena appear to be akin to the changes which may be induced by ferments, which are not only capable of increasing the amount of heat, but may be *limited* in *their actions*, or in the amount and character of the changes which they induce, in virtue of their chemical constitution and that of the blood or medium in which they are active.

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* Investigations upon the Nature, Causes, and Treatment of Hospital Gangrene, as it prevailed in the Confederate Armies 1861–5, by Joseph Jones, M.D.; Surgical Memoirs United States Sanitary Commission, vol. ii, pp. 146–570.

Certain substances, as woorara, coffee, musk, and camphor, and putrid fluids have a direct effect in raising the temperature after their entrance into the circulation. Voisin and Lionville, by means of subcutaneous injections of woorara, induced a complete artificial fever in human beings, with rigors, heats, and sweatings, the temperature rising to 104.8°, accompanied with all the signs of febrile circulation and secretion and disturbance of the nervous system.

When certain putrid solutions or pus are injected into the blood the temperature rises considerably within two hours, and reaches its maximum in from two to twenty-eight hours. After a single injection rapid defervescence generally sets in shortly after the acme has been reached, while on the other hand, after repeated injections, death constantly occurs, generally with high temperatures. Fluids from inflamed tissues, pyæmic and septicæmic blood, and even the blood drawn in simple inflammatory or other kinds of fever, produce similar elevations of temperature.

Fresse has determined by experiments that the rise of temperature induced by the introduction into the blood of the products of decomposition and of inflammatory tissue destruction do not depend upon the *pus-corpuscles*, nor upon the so-called *germinal matter*, but upon the *serum* of the fluid. *Even boiling* and subsequent *filtration does not destroy the property*; and the removal of the fibrin, and even the filtration of the blood of animals suffering from fever, does not deprive it of the pyrogenic effects when injected into the circulation.

The unknown cause which excites the specific morbid process of yellow fever would appear to have something in common with the action of such putrid animal substances, and the fact is worthy of note that the property possessed by such matters of exciting chemical changes and elevation of temperature was not destroyed by boiling and subsequent filtration; for we have thus a clear demonstration that the animalcular, vegetable, or germinal theories as to the origin of yellow fever are not *absolutely necessary* to the explanation of the febrile phenomena.

Neither the rapid rise nor the sudden declension of the temperature in yellow fever therefore are *necessarily* referable *solely* to the effects of the poison upon the nervous system; because, in the first place, the changes of the blood are among the first manifestations of diseased action, and the progress and termination of each case is largely dependent upon the extent and character of the changes of the blood and the degree of temperature; in the second place, the sudden fall of temperature during the succeeding stage of calm may be referred to the peculiarity of the self-limited chemical changes excited by the poison, and to the structural alterations induced in the muscular tissue of the heart and in the liver and kidneys, and the sedative action of the bile, urea, and other excrementitious products retained in the blood, upon the nervous system; and finally the changes in the blood, heart, liver, and kidneys are of a definite physical and chemical nature, and could never be induced by a mere exaltation or depression of nervous action, and must be referred to the introduction and action of some agent or material related in a definite manner, in its chemical constitution and physical properties, to the fluids and solids in which it induces these profound physical and chemical changes.

Without doubt the action of the yellow-fever poison upon the nervous system may be direct and most important, but the facts do not justify us in locating the origin of the disease wholly in the action of the poison upon the nervous system; and in fact the earliest manifestations of disordered nervous actions, as uneasiness, loss of appetite, and chilly sensations, may be entirely secondary to the changes in the blood, by which all parts of the nervous system are surrounded and supplied.

It is, however, impossible in the present state of our knowledge to refer the changes of temperature in yellow fever with certainty to either the decrease or increase of any one constituent of the blood; for M. Andral* has shown that when the blood contains more than four one-thousandths of fibrin the temperature rises, and in a corresponding ratio. Thus of all diseases pneumonia is marked with the greatest increase of fibrin, and is the highest in temperature of all the phlegmasiæ. Of eighty-five cases, in only thirteen was the temperature below 102.2°; in forty-four it was between 102.2° and 104°; in twenty-six between 104° and 105.8°; and in two rose to 106.16°. In acute pleurisy, in which there is always less fibrin, the temperature only once reached 105.8°, and usually oscillated between 101.3° and 103.1°. M. Andral, however, records exceptions to this relationship of the increase of fibrin and the elevation of temperature in inflammatory diseases, as in erysipelas, where there have been only seven one-thousandths of fibrin, the temperature has been 107.24°; and he very justly does not consider the increase of fibrin and the rise of temperature as cause and effect; for in the pyrexiæ, when there is no excess of fibrin, but rather a diminution of this constituent, the temperature is as high or higher than in the phlegmasiæ. Indeed the highest degrees are reached in diseases where there is the least fibrin in the blood. Neither does the number of red globules affect the rise of temperature to an appreciable degree in inflammations and fevers, as I have carefully determined by a comparison of the constitution of the blood with the elevations of temperature in various diseases.

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* Medical Times and Gazette, London, July 1, 1870.

It is evident therefore that the cause of the rapid rise and sudden decline of the temperature in yellow fever must, as I have said, be sought chiefly in the changes induced by the febrile poison in the BLOOD, and in those organs, as the HEART, LIVER, and KIDNEYS, upon which the circulation and integrity of the blood depends.

NEW ORLEANS, LA.

CLINICAL CONTRIBUTION TO DISEASES OF WOMEN.

BY THEOPHILUS PARVIN, M. D.

I. FIBROUS POLYPUS OF THE RECTUM.*

Mrs. —, forty-two years of age, a widow, states that for nearly four years she has suffered from pain in the rectum, tenesmus, hemorrhages, and that for some months past the bowel has prolapsed whenever evacuated, requiring her to replace it. Besides—this is her narrative—the bowel comes forward into the vagina and presses against the urethra, causing frequent and sometimes difficult urination. Sitting for any length of time gives her great uneasiness, while a recumbent position is comparatively comfortable. By medical advice she has used astringent injections for the hemorrhage, which is supposed to result from "piles." No examination, however, has been made.

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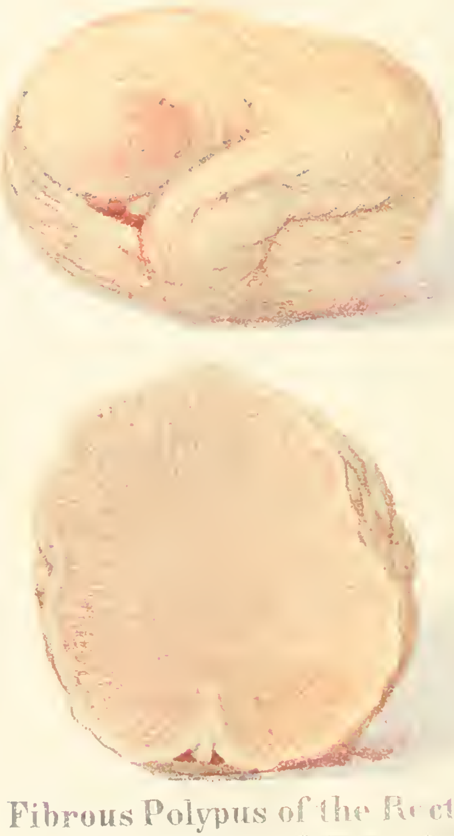
* This case was reported at the last meeting of the State Medical Society of Indiana. The reason for its introduction in this series of papers is to be found in the fact that, as in some other rectal disorders, the genito-urinary symptoms were almost as decided as the rectal.



Fibrous Polypus of the Rectum.

Behlen & [illegible]

The patient lying on her back, with her limbs drawn up, digital examination of the vagina and then of the rectum determined the presence in the latter of a hard polypus, attached by a long, thin pedicle to the anterior rectal wall two inches above the anus. Immediately the tumor was brought outside of the rectum, a ligature applied to the pedicle, and the latter divided below the point of ligation.

The accompanying lithographs very well represent the tumor as to size, appearance, attachment of pedicle, and interior structure. More than a tea-spoonful of serum oozed from the tumor after its removal, and especially after its being split open.

I should mention that the patient had no hemorrhoids, and the hemorrhages which were attributed to them resulted from the polypus. So too the supposed prolapsed bowel was this tumor, forced without the anus so that fæces could pass. This repeated expulsion of the polypus doubtless was the reason for the pedicle being so long and thin; it had scarcely the thickness of a goose-quill.

A notable feature in the case was the occurrence of well-marked rectocele, the hernia being caused by the pressure of the polypus upon the recto-vaginal wall. This rectocele indeed made the genito-urinary symptoms almost as pronounced as the rectal.

Remarks. Polypus of the rectum is rare in the adult; still rarer in either adult or child is rectal fibrous polypus. The opinions upon these points of a few authorities permit me to quote. Fabre* states that "the fibrous structure in these productions has never been met with." Copland:† "I have never observed any possessing a fibrous structure." Warren‡ refers to the rarity of rectal polypi, and records four cases, but does not mention any of the tumors as fibrous. Erichsen,§

**Bibliotheque du Médecin-Practicien*, vol. xi, page 396.

† Medical Dictionary, American edition, vol. iii, page 658.

‡ Surgical Observations, with Cases. Boston, 1867.

§ Science and Art of Surgery.

however, states that they are generally of a fibro-mucous character. Brinton,* differing still more widely from other authorities quoted, uses the following language as to intestinal polypi in general: "The interior of the non-malignant polypiform tumors generally consists of a more or less completely developed fibrous tissue." Gross† refers to the uncommonness of polypi in the rectum, and divides them into two classes, "gelatinous, or adenoid, and fibrous;" the former being of far more frequent occurrence. Allingham‡ remarks that "polypi (of the rectum) are usually described as being of two kinds, the soft, or follicular, and the hard, or fibrous; the former being found in children and the latter in grown persons. I quite concur in the statement that the soft polypus is the one always found in children, but I am of opinion that the fibrous variety is rare even in the adult." Subsequently he states that he does not remember meeting in his practice "with more than six distinctly fibrous polypi." Henry Smith,§ in his description of the different forms of rectal polypi, gives none similar to that I have presented.

The *size* of the growth is certainly quite as remarkable as its character. Another fact, to which attention has already been called, was the occurrence of rectocele. Malgaigne, whose investigations of the etiology of rectocele, though made some years ago, have not been surpassed in thoroughness and completeness, does not mention tumors of the rectum among the causes; and yet how obvious the consequence of a tumor of any considerable size in the bowel, pressing against the recto-vaginal wall?

The *diagnosis* of polypus of the rectum, impossible of attainment from *subjective* symptoms, save as a probability, a careful digital examination renders almost absolutely certain. Visual examination too just after the rectum has been emptied by an enema will often permit us at once to detect the growth, if it should chance to be situated near the anus, or have a pedicle sufficiently long for its prolapse.

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* Todd's Cyclopedia of Anatomy, vol. v, page 419.

† System of Surgery.

‡ Diseases of the Rectum.

§ Holmes's Surgery, vol. iv, page 858.

The *treatment* is comparatively simple: twist off the growth, or cut it off with scissors or knife, if it is small and the pedicle thin; if otherwise, ligate as near the connection of the pedicle and the bowel as possible, and then divide between the ligature and the tumor. And here let me say that Mr. Henry Smith advises, when a ligature is applied, "returning the polypus into the bowel and letting it slough off;" a practice which in many cases must be of doubtful necessity, and may be of positive danger. No one would think in this day for a moment of pursuing such a practice as a matter of choice in uterine polypi; and while the annoyance and the peril from a sloughing mass in the rectum may not be as great as from a similar mass in the uterus, or in the vagina, yet they are of sufficient importance to forbid their being needlessly incurred. It seems to me that the method pursued in the case reported is, where practicable, preferable to Mr. Smith's.

In cases where immediate section or torsion of the pedicle is contemplated, the relatively greater difficulty of controlling rectal than uterine hemorrhage should be considered in forming a decision.

II. CYST OF THE LABIUM.

Between three and four years since I visited Mrs. —, a lady about twenty-four years of age, married two years, pregnant for the first time, the pregnancy having advanced to the fourth month, the purpose of the visit being to operate upon a tumor situated in the left labium. This tumor was first noticed when she was about eleven years old. At the accession of puberty it increased rapidly for a time, then its growth ceased until after marriage; but since that time it had been constant, until now the tumor, quite as large as a medium-sized orange, it was feared, would be a serious impediment in parturition.

Upon careful examination I was satisfied that it was a cyst. A portion of the wall was exposed, the sac evacuated of a light, straw-colored fluid, and as large a piece of the wall cut out as I could, and lint passed into the cavity. I was disappointed in not being able to remove a large portion of or the entire cyst; but the patient was exceedingly restless, and circumstances not necessary to explain did not permit the exhibition of an anæsthetic, and my stay at the place of patient's residence was limited to a few hours. Subsequently free suppuration occurred once, or probably twice, in the cyst, but the final result I do not know.

Remarks. Labial cysts, especially such as attain the large size of the one above mentioned, are not common. Dr. Thomas, in his admirable treatise, makes no mention of the disease. Courty, the excellence of whose volume can not be too highly appreciated, briefly dismisses the affection, in company with some others, in these words: "I shall not here describe œdema, or phlegmon of the labia majora, or tumors of the dartoid sac, or encysted tumors, serous or purulent; for these diseases ordinarily do not present any peculiar indications." Churchill, on the other hand, gives quite a good description of encysted tumors, along with other diseases of the labia; but the best discussion of the subject I have seen is in Nonat* and Linas. McClintock devotes a brief space to these tumors, but the largest he mentions having seen was the size of a small hen's egg. Plate XL., fig. 1 of Boivin and Duges's Atlas represents one of these tumors found by Cloquet in a woman fifty years of age, the growth being two inches and a half long and its diameter one inch. This is about the size of the tumor spoken of by McClintock.

It is hardly possible for an encysted tumor to be confounded with œdema or phlegmon of the labium. It has neither the change of color nor the increase of sensibility of the latter, nor has it the diffused character of the former. Its history too is different: essentially indolent, no constitutional derangement either antecedent or consequent. The tumor is in the majority of instances situated upon the left side. It is painless, and is said to be usually spherical. But this last observation I do not believe applies to the tumor when large; for in the case of Cloquet, and in that of McClintock and in my own, the swelling was much more in the shape of an egg than in that of a sphere; the larger portion, supposing the patient to be standing, projecting downward and forward. The tumor is distinguished from a hernia, as Vial has pointed out, by no prolongation sent between the ischium and vagina toward the abdominal cavity, by fluctuation, by its non-disappearance in the horizontal position, by no impulse being communicated by coughing or straining, etc.

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* *Traité Pratique des Maladies de l'Uterus.* Paris, 1869.

These tumors, it is supposed by McClintock and others, "are in most, if not in all, instances produced by obstruction of the mucous or sebaceous follicles, which exist here in such numbers, or of Duverney's glands." So far as cysts are supposed to be consequent upon obstruction of the vulvovaginal glands,* may we not doubt the statement, since we so commonly see inflammation and abscess consequent upon such obstruction.

In a recent discussion in the Philadelphia Obstetrical Society Dr. Wm. F. Jenks remarked that there were in the labia glands without secretory ducts, which by the abnormal accumulation of their contents might give rise to true "retention cysts," as they were called by Virchow. One difficulty in accepting the hypothesis of glandular obstruction or of excessive glandular activity being the cause of all these cysts is that in some instances, as in the one I have narrated, the cyst contents are so different from any normal glandular secretion.

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* We wish authors would call them by this distinctive name, instead of that of Duverney, Bartholinus, or Cowper.

The treatment of these cysts should only be resorted to when they are an inconvenience, a positive discomfort, and may be an injury from their size. The simplest method of treating them (it is that to which Nonat and Linas give the preference) is to evacuate the cyst with trocar and canula, then throw in a wine or iodine injection; in a word, treat it as a hydrocele.

Dissecting out the sac is not always easily done, nor is it always free from risk, as Dr. Churchill well remarks. We can incise the anterior surface of the tumor and cauterize the lining membrane, or fill the cavity with lint, where the size of the growth and its extending up the vagina, as Dr. C. suggests, forbid extirpation. Upon the whole, however, the plan first mentioned will be the most expeditious and least painful, and to be preferred in the majority of cases, though of course it is by no means the certain cure that extirpation is. I may mention also that the plan recommended is advised by Guerin in his lectures upon diseases of the external generative organs of the female (Paris, 1864). He believes, however, that the treatment by iodized injection ought not to be resorted to if the cyst extends high up in the vagina; fearing, from the great vascularity of the organ in that part, mortal accidents that have occurred from a similar injection in hydrocele of the neck.

III. POLYPOID TUMOR OF INFERIOR PORTION OF THE VESTIBULE.

Mrs. —, a widow, twenty-six years of age, has a tumor, rather more than twice the size of a raspberry, growing from that portion of the vestibule situated between the orifice of the urethra and that of the vagina, its body spreading upward so as to half hide the *meatus urinarius*, laterally to the *labia minora*, and downward so as to partially obstruct the vagina.

The exterior surface is bright-red, bleeds readily upon being roughly touched, has an irregular surface—indeed a cock's-comb appearance. At least three years have elapsed since the tumor was first observed. It is not peculiarly sensitive, but is an inconvenience and a source of some distress in urinating. It probably would be a still greater inconvenience and distress were the patient married. Lifting up the growth with a hook it was excised, and then two sutures were passed through the edges on either side, and fastened so as to draw the tissues over the surface from which the tumor grew.

Remarks. Two observations are worthy of being made in this connection; viz., the frequency of these growths, and the facility of their reproduction. To prevent the latter, cauterizing the base with nitric acid or with a red-hot knitting-needle, as Dr. Churchill advises, are among the most efficient means. The needle—or indeed, if necessary, a larger piece of metal — can be readily heated for this purpose by an alcohol lamp. The method pursued in the case which I have reported is, however, possibly worthy of repetition in similar cases.

It will be seen upon referring to Sims's Uterine Surgery, pp. 206–7, that this plan, having for its objects more rapid healing and preventing the reproduction of these polypoid growths, is similar to the one pursued by Dr. S. in amputation of the cervix uteri.

It does not seem to me advisable to waste time — out of any mere complaisance to the patient's feelings, who may have a horror of knife or scissors—by trying to remove such a tumor with caustic or astringents. The first thing the doctor knows his attempted kindness may cost him the case; the patient abandons all hope of cure and effort thereto, or seeks another adviser.

Where the tumor is a true polypus, with a small pedicle, it is not probable that it will grow again after removal with wire, knife, or scissors; and this is true whether it be a vulval or a urethral polypus. It is only when it has a broad base—is a polypoid rather than a polypus—that it is so liable to be reproduced.

One other observation. These growths, as illustrated in the case reported, are not necessarily possessed of remarkable sensibility, notwithstanding the designation under which they have been considered by some, viz., *sensitive tumor of the meatus.* Guerin remarks, in the work already quoted, that just as we speak of *vascular* and of *nervous* papillæ, so there are urethral polypi with predominance either of the vascular or of the nervous element. The former are distinguished not only by their vivid red color, but by their greater size—frequently as large as a cherry or a filbert—while the latter are pale and rarely larger than a small pea, and their peculiar character, almost pathognomonic, is their exquisite sensibility.

INDIANAPOLIS, IND.

Reviews.

The Therapeutic Effects and Uses of Mercury. By WM. H. DOUGHTY, M. D., Professor of Materia Medica and Therapeutics in the Medical College of Georgia, Augusta.

This is a review of the report of the Edinburgh committee on the action of mercury, etc., on the biliary secretion, published three or four years ago, and forms a part of the Transactions of the Medical Association of Georgia for 1873. The question which so many seem to have regarded as effectually put to rest by the experiments of the committee is argued by Dr. Doughty in a masterly manner. We have not read a paper for a great while written in a more philosophical spirit or with more logical force. The author renders it very evident that whatever may be the final decision in regard to the physiological action of mercury upon the liver, the Edinburgh committee has by no means determined its therapeutic value. If we admit, as is claimed by the committee, that the effect of mercury upon dogs and men is the same, and admit further, what, as we shall see, we are not at all required to do, that mercury diminishes the secretion of bile in dogs, still we may maintain that the medicine exerts a corrective influence over disordered biliary secretion.

The positions taken by Dr. Doughty are, that clinical observation rather than vivisections is to determine the therapeutic virtues of remedies; that we can not always know what the curative effects of drugs will be from their physiological action; that the hepatic effects of mercury are not dependent upon a simple increase of the bile; and he points out, in conclusion, how observations on the effects of mercury upon the liver may be made. Passing by the first three, which appear to us to be satisfactorily maintained, we shall confine ourselves to a notice of the last, which forms the body of the paper.

Physiology, pathology, and observation of the sick combine, Dr. Doughty shows, to establish the cholagogue effects of mercury. The liver, in the first place, is the only organ having relations with the alimentary tract that furnishes a distinctive pigment, and the secretion is, moreover, easily recognized by reason of its abundance. Physiologists trace the coloring properties of bile down to the fæces in the lower bowel. After a dose of calomel Simon found in them twenty-one per cent. of the organic principles of bile. "Though the bile pigment," says Flint, "can not usually be recognized by the ordinary tests, it is this which gives to the contents of the large intestines their peculiar color, which is lost when the bile is not discharged into the duodenum." Rindfleisch speaks of the senescent blood-corpuscles as losing their coloring-matter, being taken up into the liver-cells, converted into biliary coloring-matter, and removed from the body with the excrement. Rokitansky says: "The color of the fæces mainly depends upon the color and degree of saturation of the bile. They may be dark-brown, dark-green, black, pitchy, or, in the absence of bile, grayish or clayey."

The intestinal dejections then afford a decisive criterion of the action of the liver, and reveal its condition in respect to health or disease. Mercurials have been held by the profession for many generations to have the power of "conferring biliousness upon the evacuations," and we must believe that this property has been justly claimed for them. If a failure of biliary secretion is shown by the color of the fæces, and if the healthy color is restored by mercury, how is it possible to doubt that the remedy causes the healthy change? And if in ten thousand times ten thousand instances relief has followed its operation in affections considered bilious, how can we doubt that the events sustain to each other the relation of cause and effect? And so the therapeutic value of mercury would have remained even if the experiments of Dr. Bennett and his colleagues had gone unchallenged. But it appears that they were too hastily accepted by the profession as concluding the point under investigation. Other experimentalists have brought out different results. It turns out in the end that mercury does promote biliary secretion, as physicians have so long insisted. At a meeting of the Gesellschaft der Aerzte, in March last, we learn from the London Lancet for August, a paper was read by Stricker containing an account of some experiments he had made, in conjunction with Dr. Röhrig, on the circumstances influencing the secretion of the liver. The defects of the former methods of obtaining the secretion were pointed out, and a new method suggested, by which it had been demonstrated that the introduction of such purgatives as croton-oil and jalap, etc., as well as calomel, "*materially increased* the secretion of bile."

Backed by the clinical argument, which Dr. Doughty shows may be urged so powerfully in favor of the cholagogue action of mercury, we suppose these experiments will be held to be conclusive as to the question. Practitioners may now go on with the use of the time-honored remedy undisturbed by the feeling that in giving it in hepatic disorders they are sinning against the light of physiological science.

A Hand-book of Medical Electricity. By HERBERT TIBBITS, M. D., L. R. C. P. Philadelphia: Lindsay & Blakiston.

A book of one hundred and fifty pages on this subject does not pretend to be exhaustive. If one wishes to master the science with all its theories we have a sufficiency of compendious volumes already published.

New points in practice, of which the efficacy is still a matter of doubt, do not concern very nearly the mass of practitioners. They prefer to apply remedies often tried, waiting for the favorable verdict of a number of competent jurors before adopting an agent new and troublesome. This book tersely sets forth well-ascertained facts available for every-day use.

Every one at all conversant with the effects of electricity will confirm the statements of Mr. Tibbits as to its unrivaled powers in nervous diseases. He has responded very satisfactorily to the demand for a clear description of apparatus, while his account of manipulation is especially to be noted for its highly practical character and the consideration shown for the comfort of the patient. Cases are cited to show when this agent is called for in preference to all others, and also when it may be hopefully resorted to after other remedies have failed.

J. W. H.

Report of Columbia Hospital for Women and Lying-in Asylum, Washington, D. C. By J. Harry Thompson, A. M., M. D., Surgeon-in-Chief. With an appendix. Washington: Government Printing Office, 1873.

The republic of medicine is to be congratulated when any of the funds of our political republic are expended so wisely as in the publication of this valuable volume. Handsomely illustrated and well printed, it is honorable to public liberality and to the medical gentlemen connected with the hospital and its dispensary.

Dr. Thompson, whose surgical ability is abundantly shown in this report of the hospital, is ably sustained by the dispensary staff—Drs. Ashford, Busey, and Prentiss—whose contributions are equally creditable with his own.

And yet the book is not faultless. It is needlessly, wearisomely large; made so by too many cases* given in detail, and by long quotations from text-books that lie upon our tables or stand upon our shelves, and by other quotations illustrative of the mere rhetoric or of the curiosities of medical literature. Indeed the passion for quotation seems to have been so strong in Drs. Thompson and Ashford, and their love for Tyler Smith's "Leucorrhœa" so great, that each gives sentence after sentence, almost page after page, precisely the same, from this work. In the discussion of *vesico-vaginal* and *recto-vaginal fistula*, most of the space is occupied by Dr. Sims's *silver-suture* address before the New York Academy of Medicine, undoubtedly the poorest of Dr. S.'s many and most of them contributions of the highest value to operative gynecology. Nearly fourteen pages are occupied with an extract from Morgagni, narrating cases of the introduction of foreign bodies into the bladder on the part of females. Billroth, Rokitansky, and Rindfleisch are drawn upon largely in the consideration of *cancer.* Now we do not believe such free quotation adds to the value of a hospital report. It gives any book a sort of patch-work character, when really this is exceedingly valuable without such additions. Dr. Thompson is not so poor—nay, he is rich in knowledge and ability—nor are his materials so sparse that he should need such adventitious aids in making a book; nor is writing a book for the profession the same thing as lecturing to a class of medical students.

Again, Dr. Thompson is not always accurate in his statements; *e. g.*, he asserts (page 45) that prior to Dr. Sims's operations for vesico-vaginal fistulæ "there was no record of a single successful case." Dr. Sims's first publication was in 1852, and in it he gives Dr. Hayward, of Boston, the credit

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*Some of the cases reported too seem to have no special fitness for a report of a woman's hospital—*e. g.*, *extirpation of the parotid gland;* so too *removal of the hypertrophied third lobe of the thyroid gland.*

of having "the first successful case in this country."* Mr. Henry Earl had up to 1829 succeeded in three cases; one of them he had operated on thirty times.† Malagodi, in 1828, operated successfully. The case is reported in the Lancet, September 5, 1829. Mettauer‡ in 1830, Gosset§ in 1834, and Dieffenbach|| in 1836, also succeeded in this operation; nor are these all the successful cases on record occurring prior to Dr. Sims's first successful operation.

Time will not permit us to refer to all the topics presented in Dr. Thompson's report, but some of them we shall briefly glance at. The first paper is upon *ruptured perinæum.* Dr. T.'s method of operating for this injury is fully set forth in the American Practitioner, June, 1870. There were also published with it two of Dr. T.'s illustrations; one being of the anatomy of the parts concerned (and unconcerned too, for that matter), and the other showing the vivified surfaces and the sutures introduced; the latter cut almost a fac-simile of one found in Baker Brown's Surgical Diseases of Women. Dr. Thompson follows in the main Mr. Brown's method of operating; save, instead of dividing the sphincter ani on each side of the coccygeal attachment, he paralyzes the sphincter in this way—"introducing the thumbs into the anus, seizing the nates on either side, and making gradual traction until the thumbs touch the tuber ischii." How much traction *the thumbs touching the tuber ischii* (which one is not mentioned) can make is a problem we shall not attempt to solve. We do not believe Mr. Brown's method of operating is at all comparable in simplicity and facility of execution to Dr. Emmet's; nor do we believe with Dr. Thompson that the knife is preferable to the scissors for vivifying the surfaces

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* Dr. Hayward's first successful case was in 1839.

† See Hayward's Surgical Reports and Miscellaneous Papers. Not equal to Wützer, for he operated on one case thirty-three times.

‡ American Journal of the Medical Sciences, 1847. Dr. Hayward's case was reported in the same journal, 1839.

§ Lancet, November 29, 1834.

|| Lancet, August 27, 1836.

to be brought in apposition. Nevertheless it is justice to him to say that his success has been both remarkable and highly creditable to his skill and ability.

We pass the weary, needlessly protracted record of cases to come to the subject of *vesico-vaginal* and *recto-vaginal fistula.*

Dr. Sims, as we have said, is the contributor of considerably more than half the number of pages under this head. The portion which Dr. Thompson furnishes includes two cases, one of *utero-vesico-vaginal fistula*, the other of *vesico-vaginal fistula, with entire loss of the urethra. Rectocele* and *cystocele* follow. Dr. Thompson's method of operating—and a most successful one it is—for these troubles is, as given in the author's words (he is speaking of *rectocele*, but the principle applies equally to the other): "The patient having been placed in the position for lithotomy, and brought under the influence of an anæsthetic, an incision is made through the whole thickness of the vaginal wall to the cellular tissue connecting it with the rectum. A steel dilator is then introduced through the opening, and by pressing the handles the blades open, gradually separating the rectum from the vagina to the extent desired. This method of dissection is preferable to the knife, it being bloodless and, if carefully practiced, without danger. I am indebted to my friend, Dr. Thomas, of New York, for this idea. The instrument is similar in construction to an ordinary glove-stretcher. The part to be removed having been thus separated from its deep attachments, a pair of strong, blunt-pointed scissors are introduced and the flap cut out. A separated margin of at least one quarter of an inch should be left for adhesion, which when united forms a raphe, and adds materially to the strength of the part. The sutures are introduced at spaces of one eighth of an inch, and are carried back so as to include the whole of the margin which has been separated. Great care must be taken in the adjustment of the parts; the approximation must be perfect or the operation will be a failure. The sphincter ani must be paralyzed in the same way as recommended in restoration of the perinæum, and the bowels kept loose. The wires are removed from the twelfth to the fifteenth day. The vagina must be frequently washed out with tepid water, and a little carbolized glycerine thrown in after each injection. This operation is simple, and, if properly performed in cases of uncomplicated rectocele, is always successful."

It will be observed, by turning to Dr. Thomas's work on Diseases of Women, third edition, page 347, that Dr. Thompson's method of operating is an important modification of "Thomas's Operation for Narrowing the Vagina." Unfortunately Dr. Thomas has not found this operation a certain remedy for uterine prolapse, for two out of his five cases had relapsed when his work was published, and possibly the other three have by this time! Nevertheless there is no reason to believe that cystocele and rectocele may not be thus cured even if uterine prolapse is not, and Dr. Thompson's remarkable success demonstrates the value of his method.

On the 70th page the author has a chapter having at its head "Diseases and Displacements of the Uterus," and then a list of disorders commencing with "Prolapsus" and ending with "Pelvic Cellulitis, etc.," the first sentence of the chapter being, "Without due reflection, it appears remarkable that the uterus should be subject to such a long list of ailments as above enumerated," etc. Pelvic cellulitis is not generally considered a disease of the uterus. The writer then indulges in some very familiar physiology as to menstruation, which might not be out of place in a text-book, and which would be eminently proper in a lecture to first-course students, but ought to have no place here.

In incomplete prolapse of the uterus, with engorgement, Dr. Thompson advocates the use of hot water by injection upon the neck of the womb, for fifteen minutes, morning and evening; cotton soaked in glycerine applied after each hot bath; pure carbolic acid once a week applied to the cervical canal for the endo-cervicitis; the administration of tonics, especially commending the "syrup of the phosphates of ferrum, quinia, and strychnia" (why not iron instead of ferrum?) He states that "there are very few cases of prolapsus in the first stages that will not yield to this treatment in two or three months." Should the vagina remain relaxed after the uterus is reduced to its normal size, use a weak current of electricity daily, what form is not mentioned. In the second stage of the disease, where the os is at the vulva, he generally amputates the vaginal portion of the neck, afterward, if it is necessary, narrowing the vagina.

In the narrative of cases of *prolapsus* uteri we regret to find the following prescription:

℞. Butyrii cocoæ, ... ℥ ij;
Aq. ext. opii, ... gr. xij;
M. Ft. suppos., No. vi.

Of course the second ingredient should be written ext. opii aq.; and as to the first, *butyri*, not *butyrii*, is the genitive of *butyrum;* while the genitive of *cacao*, not cocoa, as Dr. T. makes it, is *cacaonis*. These may seem little matters; but if our masters will not write Latin prescriptions correctly, how are we of the common herd to succeed in this, and had we not better try to write in plain English?

In the treatment of uterine cancer, Dr. Thompson has "found pure bromine more effective than any other caustic in arresting rapidly destructive ulceration." To destroy the fetor of the discharges he uses bromo-chloralum.

We have not space to present the author's view of *diseases of the vagina and of the neck of the womb.* Following their consideration is a most interesting case of removal of the handle of an iron crotchet-needle from the bladder, which had become incrusted by urinary salts. The removal was effected through a vesico-vaginal incision.

Urethral caruncles are briefly considered. He speaks of them as "essentially recurrent, repeatedly returning after the most thorough and careful removal." "If not painful or inconvenient, *leave them alone*." In the name of good taste and professional propriety, what doctor objects to their solitude and wishes to remain with them? We profess our utter detestation for the caitiff who covets caruncular companions, refusing to "*leave them alone*."

Three cases of "*pelvic cellulitis*" are reported, but really the first two read wonderfully like cases of pelvi-peritonitis. *Diseases of the rectum* occupy the last part of Dr. Thompson's work, and their consideration is quite as interesting and valuable as any thing which precedes.

The dispensary reports constitute the appendix. The first of these is by Dr. F. A. Ashford, and is upon diseases of women. He presents "a condensed synopsis of cases" treated since 1869, embracing sixteen hundred. This presentation he thinks he may well begin "under the aphorism *uterum mulier est*." If this *fragment* of an aphorism can be translated at all, it would be *uterum is a woman;* but such translation is not less absurd than the original. If Dr. Ashford thirsts for a display of his classic lore, why does he not say *E pluribus unum*, and be done with it? The subjects discussed by Dr. Ashford are *acute metritis*, *chronic metritis*, and *endo-metritis*. These subjects are fairly presented, but nothing is offered in therapeutics worthy of note.

Dr. Busey follows with an admirable report from the Department of Diseases of Children. It is really the best paper in the volume. It embraces three articles: the first, intermittent fever; the second, entero-colitis, cholera infantum, dysentery, and difficult dentition. The third is upon the value of certain drugs in the treatment of bronchitis. We regret being compelled to pass Dr. B.'s paper with this brief reference.

The final report is from Dr. Prentiss, a short notice of which from a friend, Dr. James Thompson, of Indianapolis, much better qualified for its consideration than we are, is here introduced:

"The section on ophthalmology and otology commences with a sadly interesting case of 'rupture of both eyes,' the patient being a 'respectable German woman, aged forty-two years.' The fingers of a scoundrel were thrust into her eyes, which ruptured them both at the inner corneal borders. Vision was totally and permanently destroyed.

"'Herpes of the cornea' then claims attention. Thirty-eight cases were treated; seventeen were cured, nine were seen but once or twice, so that the result was not known, and the remaining twelve cases were improved, some of which are still under treatment. The treatment advocated is soothing during the acute and mildly stimulating or irritant during the chronic stages. Atropine, pressure-bandage, etc., for the former; calomel, yellow oxide of mercury, etc., during the latter; cod-liver oil and syrup of the iodide of iron, or citrate of quinine and iron, constitutionally. The reporter remarks: 'The sulphate of zinc collyrium, which is almost a panacea for all inflammations of the eye in general practice, is especially to be deprecated in the earlier phases of the disease now under consideration.' One might add that nitrate of silver and acetate of lead are equally if not more dangerous during the stage spoken of, especially the lead.

"The remainder of the report is taken up with trachoma, its pathology and treatment. The report contains nothing of interest to the specialist. Indeed, one could not expect much where but one hundred and ninety-six cases were seen during a period of nearly three years. It was simply written 'in accordance with a request,' and for the purpose (one may presume) of showing what the hospital had accomplished during that period. To the general practitioner, who has not perused the more recent text-books on the eye, it contains valuable information."

In conclusion, while we have not hesitated to criticise where criticisms seemed needed, yet we are glad to commend the general scope and character and most of the details of this report. Its authors merit the thanks of the profession. T. P.

"**Refraction and Accommodation:** A Review of Dr. D. S. Reynolds's Critique on Dr. C. S. Fenner's Pamphlet."

The August number of this journal contains under the above heading a reply to a review that appeared in the July number. The respondent thinks your reviewer treated him rather severely; that the criticism was in part erroneous, besides being irrelevant. Of this the reader must be the judge. But to remove the impression that we have been hypercritical we propose to look a little further into that occult science which Dr. Fenner says the Germans have built up in the last quarter of a century.

The theory that the ciliary muscle effects the change of refraction in the eye during accommodation for near vision was very ingeniously put forth by Porterfield in his "Treatise on the Eye," published in 1759. Thomas Young published in the Philosophical Transactions for 1801 a demonstration of the change of form in the crystalline lens during accommodation. So early as 1793 Dr. Young was convinced of "the muscular character of the fibers in the lens." In 1872 Prof. McNamara, by careful microscopical research, confirms the observation that "the fibers in the crystalline are muscular, and that the change of form during accommodation is due to an inherent power resident in the lens" itself.

As to what influence the ciliary muscle has in effecting the change in accommodation, the question progressively loses interest, since it is known that division of this muscle does not in the least interfere with the accommodative effort.

It has long been known that the relations between the ciliary bodies and the periphery of the lens do not change in any manner during accommodation; and further, that the circumference of the lens undergoes no diminution. (Donders, page 27.)

Dr. F. says: "The lessening of the transverse diameter of the eyeball by the action of the recti muscles exerts a direct pressure on the equator of the lens, and renders it more convex than it can be made by the maximum tension of the ciliary muscle." He then gives directions for proving that accommodation for near vision ("one and a half inches") is due to the above-explained action of the recti muscles, thus shutting the ciliary muscle out from any claims it previously had to the rank of "accommodation muscle."

Dr. F. quotes Wells to show that Donders ascribes amblyopia to the presence of astigmatism in many cases. Now Donders, in speaking of a case in his practice which had for three years been regarded as amblyopic, says: "This is one of the thousands in which astigmatism has been looked upon as amblyopia, and has been treated as such." Again, in treating of the differential diagnosis of the two affections, Donders says: "In astigmatism, on the other hand, in contrast to amblyopia," etc., "the disturbance of vision connected with this anomaly is neither to be compared with that proceeding from defects of the retina (amblyopia)." He distinctly disclaims any other effect from glasses in the treatment of amblyopia than that of magnifying the image of objects on the one hand, and powerfully stimulating the dormant retina with concentrated light by means of strong convex glasses on the other. Graefe says, in his clinical lectures on amblyopia and amaurosis: "In the more favorable and curable forms of amblyopia there must exist anomalies in the circulation or nutrition." Without visible pathological change, "all cases are due to an impairment of function in the retina." Such is the verdict of Stellwag, Wells, Lawson, Laurence, and, in fact, every writer on the subject for the last century, with the single exception of Dr. F., who says: "Many cases of amblyopia are now entirely relieved by neutralizing the aberrations of refraction by appropriate lenses." Unfortunately, however, he does not tell us who relieved a single one of the "many cases."

The optometer of which Dr. Fenner speaks as invented by Graefe was described in Porterfield's "Treatise on the Eye" just sixty-nine years before Graefe was born. And it may not be uninteresting to know that Huygens, the Dutch astronomer, who died in 1695, really invented the wire optometer used for the measurement of the range of accommodation, with which Porterfield has pretty generally, though erroneously, been credited.

Dr. F. described another means of detecting astigmatism, which is so strikingly original that we can not refrain from reproducing it. He says, "Another method is by making numbers of groups of three lines, parallel to each other, diverge from a point like the spokes of a wheel." How he gets the groups of lines, and how he makes them diverge, we are curious to know. In the American Journal of the Medical Sciences, January, 1867, Dr. John Green, of Saint Louis, gives an account of a new method for "the detection and measurement of astigmatism," by the use of "twelve sets of triple radiating lines printed upon a circular card, and corresponding to the twelve hours of the clock." This, it is supposed, is what Dr. F. referred to as one of the recent German inventions.

On page 4 of the "treatise" we find the following: "If we take a small object (No. 1 Snellen) and hold it at the furthest distance at which the normal eye can distinctly and sharply see it, we have the far point (r), and this represents the natural refractive state of the dioptric apparatus." If Dr. F. means No. 1 of Snellen's test-letters, then the distance at which the letters are seen, at an angle of five minutes, is twelve inches.

And this not only does not "represent the natural refractive state," but, on the contrary, represents the maximum degree of tension of the accommodative apparatus that it is possible to maintain long enough to read even for a few minutes without a sense of fatigue. Helmholtz says: "The natural refractive state of the dioptric system is that state in which no accommodative effort is required to complete the act of vision—the state of the normal eye for vision at all distances beyond eighteen or twenty feet."

Dr. F. says he has by a large number of tests ascertained that most persons of the South and West have a normal visual angle of four minutes; and winds up by announcing that "an angle of five minutes is the smallest one (except in small children) at which the Germans and some other European nations can ordinarily see with distinctness." Snellen's are the test-letters in universal use in Germany, and, in fact, in most countries. These letters are "composed of limbs just one fifth the diameter of the letter's height; for instance, our letter C shows an opening as compared with the O of one minute visual angle. In testing accuracy of vision we accept *perfect recognition* and *not* uncertain perception." This is the language of Snellen, whose test-letters are printed in English, French, Italian, German, and Dutch.

As to Dr. F.'s intimation that small children have a smaller visual angle than adults, it is about as probable as that the people of the "*South* and *West* have a normal visual angle of *less* than five minutes;" when to distinguish a letter whose area covers an angle of five minutes the limbs of the letter are actually seen under an angle of one minute by the English-speaking nations, and by the Germans, French, Dutch, and, in fact, every civilized nation on earth. Children, whether large or small, require an angle equal to more than twenty times that required by adults for distinct vision. This gradually diminishes from infancy up to the tenth year, when the angle is generally found to have arrived at the normal state—

five minutes—for continuously exercising the visual power, as in reading or the like.

Dr. F. insists that convex glasses of seventy-two inches focus are quite sufficient for the preservation of good vision for many years in cases of presbyopia. In other words, if No. 72 be selected as the proper glasses, "the rapid senile changes in the crystalline lens are prevented," whereby the further development of presbyopia is arrested, and age is no longer permitted to manifest its advance in the growing defect of vision. This will be pleasant news to the old people whose eyesight is beginning to fail.

We were made to say in our review that "Airy discovered compound irregular astigmatism." We wrote "regular" astigmatism. As Dr. Fenner failed to point out the mistake, we deem it proper now to correct it. But we must not take up more of the time of our readers on points which, however interesting to Dr. Fenner and the writer, can hardly be expected to interest the majority of practitioners. D. S. R.

Clinic of the Month.

MIND, BRAIN, AND SPINAL CORD.—The Croonian Lectures for 1873 were delivered by Dr. C. B. Radcliffe, a physician whose writings on nervous disorders are familiar to most American practitioners. The subject selected by the learned lecturer, "The Mind, Brain, and Spinal Cord in certain morbid conditions," was one for which his studies and tastes seem to have peculiarly fitted him. We do not remember ever to have seen it handled in a more striking way. Our only regret is that our limited space does not allow our copying the lectures entire.

"*On Delusion.*—Delusion is not an indefinite disorder of the intellect and fancy coming on, no one knows how, without warning of any kind, but a very definite disorder, taking many shapes, each of them associated with some morbid mental condition from which it can not be dissociated, and often receiving this shape, as it would seem, as a natural consequence of the mind having been allowed to go wrong in the direction of some particular morbid mental condition, intense self-conceit, misanthropy, melancholy, or other. Nothing is more certain than this, that by indulging in a perverse way of feeling or thinking, sooner or later, the reason and will are mastered by this feeling or thought, and that when this point is arrived at the feelings and thoughts and actions, as a matter of course, become more or less irrational and involuntary. Arrived at this point indeed, any delusion, any fancy may easily take undisputed possession of the mind. And thus the delusion, instead of being something almost unintelligible, becomes little more than a natural consequence of the unresisted continuance of the particular morbid mental condition with which it is associated, and from which it can not be disassociated.

"If the mind be allowed to rest too long in any of these morbid mental conditions which are constantly associated with delusion, the will and reason are deposed and feeling is enthroned in their stead. This is all ; for when feeling is raised above will and reason the result of necessity is not only disorder but delusion. And thus insanity becomes somewhat more intelligible, inasmuch as it reduces itself to little more than the natural consequence of the mind having been allowed to go wrong in the direction of some perverse feeling until a point is arrived at in which the will and reason have no longer any control over it; an end in which—for all the unchecked evidences of the mere feelings are delusive—delusion in one form or another is the inevitable result.

"And if delusion take these different forms, and is brought about in these different ways, it is plain that there are several very definite indications of treatment, which may be followed out in a very hopeful spirit. The case is not one in which delusion is no one knows what, coming about no one knows how, in which the physician is left in a state of uncertainty as to what ought to be done to prevent it and to cure it. The case is definite enough. There are several morbid mental conditions, as intense self-conceit, misanthropy, melancholy, uncontrollable impulsiveness, and the rest, preceding insanity, continuing when insanity is actually developed, and each of them leading naturally to the delusion which is the conclusive evidence of insanity. There is, in fact, a definite morbid mental condition other than delusion to be dealt with. By dealing with it delusion is to be prevented; nay more, by dealing with it delusion is to be counteracted and conquered. It is as much a duty to deal seriously with this morbid mental condition as it is with the actual delusion; for delusion is the natural consequence, sooner or later, of leaving it to itself.

Every effort must be made to teach the patient that he is responsible for his feelings and thoughts as well as for his actions; that he can and must master them; and that if he does not try, his will and reason may soon become too powerless to prevent his feelings and thoughts and actions from becoming involuntary and irrational, as in insanity. He must be helped and made to try to do all this in every possible way. A proper mental discipline must be enforced, upon the details of which I can not and need not enter.

"Nor is a different course to be followed when matters have gone further wrong, and there is actual delusion. Certainly all is not done in this case when the lunatic is provided with a comfortable home, and when every conceivable care is taken of his body. All this is wanted, and more also—much more, if what I have said about mind be true. What is wanted is that medical and clerical aid should be brought into closer conjunction than they are at present, with clearer notions in both physician and clergyman as to the autocracy of *mind.* What is wanted is the co-operation of educated persons, similarly enlightened as to mind, who will as a labor of love tend upon the lunatic, giving him the helping hand which now in so many instances they are giving to the ordinary sick. What is wanted also are more carefully-trained ordinary attendants. With respect to the ordinary nursing of the insane indeed a great revolution is necessary, akin to that which is being brought about in ordinary nursing by Miss Nightingale, by the Misses Merryweather, and by their fellow-philanthropists."

Concerning Neuriasis, a term which Dr. R. proposes to give to a disorder half nervous, half mental, underlying hysteria, hypochondriasis, and certain other affections akin to them, he says, in a recapitulation of the subject:

"Respecting the physical and mental peculiarities of neuriasis, among the former will have to be placed proneness to pass large quantities of pale, limpid, neutral urine under any emotion or excitement, or after it, with a frequent irresistible *besoin d'uriner;* proneness to abdominal flatulence, *pneumatose intestinale;* proneness to fits of laughing and crying without sufficient reason for them; proneness to globus, proneness to overflow of saliva, proneness to constipation, together with tenderness on pressure, with more or less uneasiness, or actual pain apart from pressure, in one or other part of the abdomen, or under the left nipple, or somewhere in the course of the spine, with a marked disposition to spasm and periodicity in one form or another; and among the latter or mental peculiarities undue self-sensitiveness, overpowering craving for sympathy, quick and perverse likes and dislikes, feebleness of will, showing itself in impulsiveness and in many other different ways; fancifulness, imitativeness, unbalanced spirits, the inclination being commonly toward despondency; and lastly, a comparatively feeble sense of moral obligation.

"Few in the present day will be prepared to contend that the womb has any special connection with hysteria, or the liver or any other abdominal viscus with hypochondriasis, or to doubt the correctness of the view which regards both hysteria and hypochondriasis as disorders, closely allied, of the nervous system. Still it may be doubted whether, practically at least, the latter view is as clearly realized as it ought to be—whether the word hysteria does not still retain a good deal of its old meaning, and not unfrequently mislead effectually in practice. At all events, hysteria and hypochondriasis can be no fitting names for that general derangement of mind and body of which I have been speaking; another name is evidently desirable which will point away from the womb or liver or other abdominal viscus to the nervous system; and hence my excuse for proposing the term neuriasis. I hope, however, that a time will come before long—the time is not yet ripe, I allow—when it will be possible to get a step further than this, and choose a name which will include the *mental* as well as the *nervous* half of the disorder in question;

for I can not help but think that the *nervous* trouble is the effect rather than the cause of the *mental* trouble. Nay, I am even sanguine enough to hope that eventually, by the institution of a sound discipline in which the mind is taught, chiefly through the influence of wise mothers acting upon it in the morning of life, to know and exercise its high powers of subjecting the feelings and thoughts as well as the actions to sound reason and will, that mankind may be delivered not only from the evils of neuriasis, but even from the still graver evils of actual insanity."

FUMING NITRIC ACID FOR INTERNAL PILES.—Prof. Billroth records twenty-six cases of prolapsing piles treated by him in various ways. In four instances he applied the actual cautery, in ten the galvano-cautery, and in the remainder fuming nitric acid. The latter plan was pursued as recommended by Dr. Houston, of Dublin. The results proved eminently satisfactory. His mode of proceeding was as follows: A free evacuation of the bowels was obtained by means of castor-oil given the day previously. Before the operation the mass was brought down by an injection. The patient was then placed on the side, with the knees flexed. The parts adjacent to the anus were first well protected by oil, so that no injury should be done them. A small piece of wood was then dipped in the acid and applied to the outside of the swollen mass, until it had become tolerably stiff, and had assumed a yellowish-green color. It was then smeared with some simple form of ointment, and returned within the sphincter. The operation was usually performed without an anæsthetic, and an opiate suppository was rarely given afterward. It is proper to keep the patient in bed. Fever rarely follows, though retention of urine is not uncommon for the first few days. The eschar usually separates without loss of blood. It is proper to give castor-oil on the third or fourth day, provided no fæces have passed. Hemorrhage will be likely to occur if the fæces become hardened; such accidents, however, are readily controlled by ice. Of the patients treated in this way some were discharged on the fifth and ninth days, though severe cases were under treatment from six to eight weeks. Several of the patients were examined a year after the operation, and there was no stricture in any one of them. Billroth believes that in very severe cases this treatment may fail, and then suggests the use of the acid nitrate of mercury, as recommended by Curling. (*Wiener Med. Wochenschrift*, No. 35, 1871.)

ISNARD ON THE TREATMENT OF CONSTIPATION BY ARSENIC. Dr. Isnard (*Marseille Médical*, 1872) states many other physicians besides himself have observed that arsenic excites the appetite and improves the digestion and facilitates the action of the bowels, but he is not aware that it has been methodically applied for the relief of constipation. Besides (1) improving the appetite, it (2) excites the muscular action of the intestines, and (3) it augments the secretions of the alimentary mucous membrane. It is particularly useful in the constipation of debilitated and anæmic females, sedentary persons, and old people. He administers arsenious acid in the dose of six to ten milligrammes, twice or thrice a day, with food. Sometimes smaller doses suffice. It may be used steadily for some time.

DIGITALIS AN ANAPHRODISIAC.—M. Gourvat, in the course of a paper published in the *Gazette Médicale de Paris* on the action of digitalis, says: "When digitalis or digitalin is administered for some time to a man in full possession of sexual powers, these become gradually weakened, the propensities disappear, formation of the liquor semenis diminishes, and may at last cease altogether. The anaphrodisiac properties of the drug are the secret of its good effect in spermatorrhœa."

Notes and Queries.

Bromo-chloralum in the Treatment of Vaginal Discharges.—Dr. Melvin Rhorer, of Louisville, has been using for some time back bromo-chloralum as a topical application in vaginal discharges with a success which leads him to esteem it an agent of considerable value in this class of cases. Owing to its antiseptic as well as astringent properties, he regards it of especial value in such discharges as are accompanied by fetor. He applies it in certain conditions, undiluted, directly to the seat of the disease by means of pledgets of lint; at other times he uses it as an injection or wash of varying strength, beginning generally with one part of the ordinary solution to eight parts of water. Dr. Rhorer writes:

"In leucorrhœa, an affection in which I have had frequent opportunities to try it, when associated with anæmia, chlorosis, or merely a lax state of fiber, I have usually met with very marked success, combining a course of general tonics with the local treatment. Before using the bromo-chloralum the vagina should first be thoroughly cleansed by injections of tepid water, made best by means of a Davidson syringe; after which about a pint of the injection, one to eight, should be thrown well into the canal one or more times daily. The discharge is generally diminished, and sometimes is arrested altogether, by the first injection. Occasionally, however, no effect whatever is observed, when I am in the habit of increasing the strength of the injection up to the point of producing decided burning or even pain after its use. In leucorrhœa depending on ulceration of the os the bromo-chloralum should be applied undiluted, on pledgets of lint, immediately to the seat of the trouble. By this means I am certain that in some cases at least I have accomplished more than I have done with nitrate of silver or carbolic acid, especially where the lesion was not attended by much loss of substance, but consisted of simple erosions.

"Gonorrhea in the female I have also sometimes found to be promptly arrested by this agent. In cases where the inflammation is considerable, and the parts swollen and tender, injections of almost any kind cause, it is well known, great pain. Here before using the remedy it will be necessary first to reduce the inflammation by hot applications, hot hip-baths, injections of warm water where these can be borne, and by constitutional means. Gonorrhea frequently persists by reason of the seat of the disease not being reached by our remedies. It is therefore indispensable to any full measure of success that frequent examinations of the parts involved—the vulva, vagina, and os—should be made, in order to see whether our remedies are being properly applied. Where the disease affects the vulva, vaginal canal, and urethra alone the injections may safely be intrusted to the patient. The same may be said of the management of lint or cotton when used to keep the lips of the vulva apart; but when the disease is deeper seated, affecting the os or the cul de sacs, it will generally be found necessary that the physician should make the injections with his own hand. From a neglect of this precaution cases which had hung on for weeks yielded in a few days.

"Allow me here to insist on the necessity of making all injections into the vagina while the patient is in the recumbent posture. As ordinarily done—stooping over a vessel and injecting with an ordinary syringe—the fluid often escapes without reaching the parts affected. A bed-pan placed beneath the patient's hips will prevent the clothes being soiled. Gonorrhea of the vagina has generally yielded to this treatment in from eight to ten days. Gonorrhea in the male has not yielded to the bromo-chloralum, the urethral mucous membrane in the male being too sensitive to admit the use of the remedy of a strength capable of doing good.

"In uterine carcinoma the bromo-chloralum will promptly arrest fetor; while in clots of the uterus, and in the fetid discharges which succeed abortions and labors, I much prefer it to the ordinary disinfectants, such as bisulphite of soda, permanganate of potash, etc.

"Bromo-chloralum may, when it is desirable, be combined with other therapeutic agents. We have sometimes thought that the addition of opium or some of its salts has increased its efficiency in certain cases marked by tenderness. Finally it recommends itself by its cheapness."

CHOLERA.—Cholera is disappearing from all the places in our country where it has prevailed, and is not breaking out at any new points, from which there is reason to hope that the present season will pass away without its becoming epidemic. Three or four cases have been reported in Louisville during the last month. At Chicago a few fatal cases have occurred. On the 9th of August it was announced that in St. Louis during the preceding week eighteen deaths had been produced by cholera and thirty by cholera morbus.

Our friend, Dr. Foss, has given us the history of some cases which, if not cholera, bore a striking resemblance to that disease. They occurred in his neighborhood, nine miles south of Louisville, toward the end of July and early in the present month. A mother and her two children—one aged five years, the other nine months—were attacked with purging and vomiting. The children died in about forty-eight hours; the mother recovered. On the 3d of August a German boy, aged eleven years, was attacked in a similar way. Dr. Foss found him with a cool skin of a bluish tint, very restless, and with great thirst. He died in fifty-six hours. The third night after his death his mother was seized with vomiting and purging, but recovered. On the same night Mr. D., who had sat six hours with the corpse of the German boy, was attacked with the same disorder. Dr. Foss saw him next morning, and found him with a cool, bluish skin, face pinched, voice husky; pulse 60, feeble and intermittent; temperature 96½°. After passing rice-water forty-eight hours he recovered. Rice-water discharges attended all the cases, of which just one half terminated fatally.

The chief point of interest in the history of these cases is the character of the dwelling in which the subjects lived. "It is a flimsy two-story frame building," as Dr. Foss describes it, "with eight rooms, and stands on flat, badly-drained, stiff clay ground. It was occupied by three families and some hired hands, numbering in all about twenty tenants. Sixty feet south-east of the house is a stable accommodating eight or ten oxen, three horses, and three cows. The hog-and-cattle lot reached within ten feet of the dwelling. The entire drainage of this establishment passed under the shed-rooms at the north end of the house. This drain was obstructed in such a manner as to form a pool under these rooms, and a second one within four feet of the only door of the building."

The subjects of the first cases slept in the second floor of this shanty. The boy slept over one of the pools on the first floor, and after his death his mother occupied his bed. The average duration of the disease in all was three days.

The August number of the Nashville Journal of Medicine and Surgery contains a graphic and most interesting account of cholera, as it prevailed in that city this season, from the pen of its senior editor. Contrary to what has been stated, and to what we believed to be true, Dr. Bowling shows that the fatal epidemic was far from being confined to the creek and branch bottoms in the suburbs of the city; but that in the beginning at least all places alike were assailed, and that the greatest mortality occurred in a community of blacks on a hill, "higher than the heights occupied by the reservoir or the state capitol." Dr. Bowling says that "it loved the high places and the clean places — clean because high — and did not flourish on runs or licks or branches." New Bethel, the community referred to, in which nearly half the population was carried off, is not only high but dry, "thoroughly drained, and with no branch or run in a mile of it." Here the "miserable population suffered ten times more than in any village of shanties in the low grounds." On Rolling-mill Hill, with no creek or branch within a mile of it, a mortality of twenty-three occurred, while in a very much larger population, on Lick Branch or Cockrill Creek, the mortality was only nineteen. A village at Fort Gillem, outside of the city, on a plateau as high as the water-works, lost seventeen, while only four died on Wilson's Spring Branch. Of the first seven cases six occurred on high ground, and the locality of the seventh was not low, and moreover was remote from any stream. Of the first seven negroes who died, six lived on elevated spots in various quarters of the city. On "black Friday," as it is styled by the people of Nashville, the 20th of June, the deaths from cholera amounted to seventy-two, of which forty-nine were among the blacks. The cases were distributed, Dr. Bowling shows, "over an area of three miles by four, an overwhelming majority occurring on high, well-drained land, and remote from creeks."

And so it was in former epidemics at Nashville, as Dr. B. relates. The top of College Hill was the first point assailed in 1850; the side of the hill sustaining the assault at a later day, and the inhabitants in the bottom remaining free from the pestilence, notwithstanding that their houses had been under water from a flood in the Cumberland a few weeks before. On that part of Lime Street which lies along the side of a hill not less than forty persons died of cholera, while on the section which extends into the valley not one died.

In a word, cholera avoided those localities at Nashville most subject to intermittent fever, and prevailed with signal mortality at points where intermittent fever is unknown. Nevertheless it may be doubted whether New Bethel, with its miserable colored population, "crowded into noisome shanties," should be called a "clean" place. It is in precisely such noisome places that cholera every where has exhibited its greatest malignity. And although in the beginning it seemed to attack all points alike, the "localizing causes" operated powerfuly at last, and determined the frightful mortality of New Bethel and some other localities. The influence of local causes is conclusively shown by the fact that the number of blacks to the whites that died was nearly two to one.

It has been stated that cholera was imported into Nashville from Memphis or New Orleans. Dr. Bowling gives satisfactory reasons for doubting the truth of this statement; he assures us that no one came to Nashville from any place with cholera before the epidemic broke out, or during its progress. It may be alleged that persons from those cities brought the germs of the disease in their clothing, but the mode of its invasion is hardly consistent with the idea of its having been introduced by persons. Its progress was not successively from point to point, but "every ward in the city about the same time offered up one or more victims." "The disease," Dr. Bowling's remark is, "*fell* upon them." It was not preceded by the premonitory diarrhea which has been called cholerine; but broke out when high health was prevailing, at the close of the Exposition, and when the city was crowded with visitors.

We can not say that Dr. Bowling has made out his point respecting the connection between cholera and diet. A great many observations, a very long process of induction would be necessary to convince men that a disease which carries off its victims in a few hours can be induced by drinking a few glasses of buttermilk, or by eating a few peanuts or an egg or two. Our learned friend of the Nashville Journal cites many instances of the sort by which his mind is thoroughly convinced. A professor, for example, he says, after escaping the disease long by dieting, "tried buttermilk, and it killed him." Mrs. L., being constipated, "stirred up two raw eggs in a pint of sweet milk and swallowed it, and slept that night in her grave." A woman ate some cabbage for dinner, and was in her grave that night. Another woman settled her coffee with the white of an egg, and fried and ate the yelk, from which she was near dying of cholera. A lady ate some raspberries with milk for dinner, and was dead before bedtime. "One of the most beautiful and accomplished young ladies in the city ate two or three pickles, and died." And after a few more instances like these, Dr. Bowling exclaims, "Let any medical-book-making or journalistic physician who advises fruit and vegetables in cholera times read these details and think!"

We have read them attentively, and have been thinking on the subject of diet in disease for a long time, but we confess that these details have not convinced us that cholera is ever caused by food. The result of all our observation and inquiry on the subject is a thorough conviction, on the contrary, that cholera needs no aid from food for its development, and that the diet which is most conducive to health in ordinary seasons is the safest and best diet in cholera times.

In regard to treatment, Dr. Bowling says nothing encouraging. Astringents, he declares, did no good, and opium did harm in the cases in which collapse supervened rapidly upon the purging and puking. Stimulants, given internally or applied to the surface, were equally unavailing to excite reaction. In the worst cases he prescribed "the *mistura rubra* of the London Hospital," with iced and saline lemonade, and crushed ice and ice-water *ad libitum.* He favored vomiting by the free use of ice-water. In addition, he gave to many of his patients in collapse the sixth of a grain of calomel every half hour, and we infer from his remarks that some of them recovered. He publishes a note from Prof. Nichol, who says that in all the cases which came under his care he relied upon quinine and calomel. Prof. N. gave opium and its salts sparingly. He found quinine a liver medicine, and remarks that he has "seen the character of the discharges which we recognize as bilious follow the use of quinine as promptly as that of mercury." "The bad practice here," Dr. Bowling remarks, "consisted in a mad effort to stop the purging, and an unwise effort to stimulate the system into reaction."

Since the foregoing was written cholera has been announced at Lancaster, in this state, where twenty-two deaths from the disease had occurred in a week, but no new case was reported on the 24th. Nearly all the deaths were among the colored population.

"To the Surgeons (Field and Hospital) of the Armies of the late Confederate States.—For the advancement of science—to rescue from oblivion all the important medical and surgical facts developed within the armies of the Confederate States during the late war—it has been determined to call a convention of the Confederate surgeons (field and hospital) to meet in Atlanta, Ga., May 20, 1874. Immediate action is considered absolutely necessary. Since the war many of the most talented of the medical staff have died, and yearly others are added to the list, their valuable medical and surgical experience entirely lost to the profession.

"For the success of this great scientific and historical association it is earnestly recommended that the ex-Confederate surgeons of each of the Southern States at once take such steps as will secure a large delegation. The co-operation of the medical staff of the late Confederate navy is respectfully solicited. Besides the contributions to science, the social features of this organization—the revival of old army associations—will be of no secondary interest. The railways of the South, with their usual courtesy, will no doubt grant excursion tickets for this most important occasion."

The above circular is signed by S. P. Moore, M. D., late Surgeon-general C. S. A., Frank Sorrel, M. D., Hunter McGuire, M. D., Frank Rice, M. D., Samuel Logan, M. D., John T. Darby, M. D., and twenty other well-known Confederate surgeons. It is accompanied by a letter from Dr. Edwin D. Newton, of Athens, Ga., who writes: "This call is based not alone upon the action of the Georgia Medical Association, but the earnest solicitations of many Confederate surgeons throughout the South as repeatedly expressed within the past two years."

We hardly need say that a movement which looks to bringing together the hundreds of strong and good men who gave luster to the medical service of the Confederate States army has our most cordial support. We believe it will meet a hearty response from Confederate surgeons all over the country. It is greatly to be regretted that some systematic effort to collect the professional experiences of the medical staff of the southern army had not been inaugurated soon after the close of the war. These experiences were fresher then, and there were more men to relate them; still it is not yet altogether too late to organize and begin the work. The surgeons who have taken the initiative in the matter deserve the thanks of their old comrades. Let us hope that the results of the movement will be such as to give additional honor to the name of "surgeon of the Confederate States army."

EUCALYPTUS GLOBULUS IN MALARIAL FEVERS. — As the season for marsh fevers is now at its height, the following note from Dr. F. B. Schulz, of Grand Tower, Ill., giving his experience in the use of the eucalyptus, will be of interest:

"I have now used the tincture of the eucalyptus globulus with well-marked success in thirteen cases of intermittent fever of the several types usually presented by that affection. In one accompanied by enlargement of the spleen, besides giving the medicine internally, I applied it by means of cloths saturated with it directly over the enlarged organ. Whether this had any thing to do with the cure I am not prepared to say, but the ague-cake had disappeared at the end of a couple of months. Ferruginous tonics, purgatives, etc., were given conjointly with the eucalyptus, as I am in the habit of administering them when using quinia. The dose of the tincture, as given by Lorinser, in Vienna, is a dessert-spoonful, in water, taken four hours and again in two hours before the time of the expected paroxysm. In severe cases, or where the chill has returned, Dr. L. directs that the dose be increased a teaspoonful. I use the following:

℞. Tinct. of eucalyp. glob., . . ℥j;
Syrup of raspberries, . . . ℥ss;
Water, ... ℥iv.
M. Dose, a table-spoonful every two hours during apyrexia.

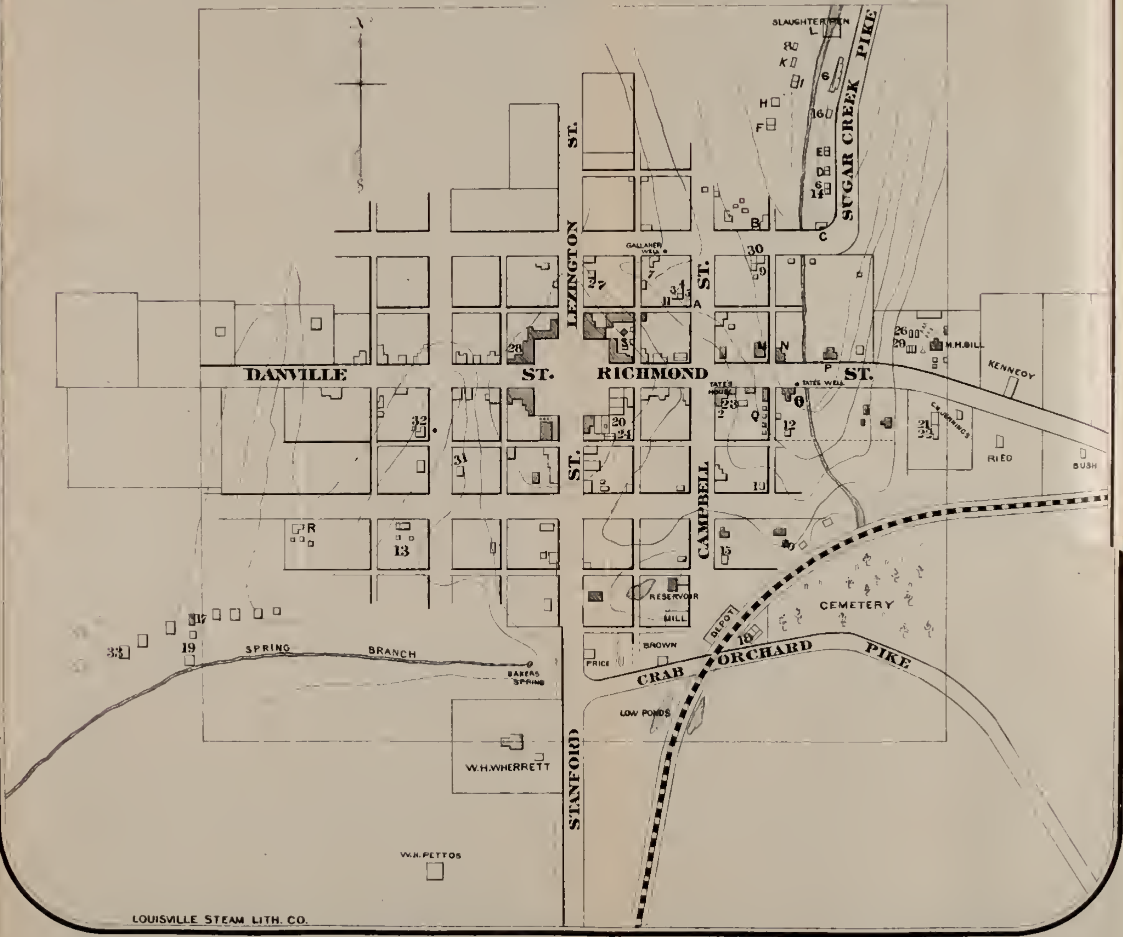
Patients made no complaint of the taste of the mixture, and it gave rise to no disagreeable symptoms. I think finally that the disease yielded about as readily as it does to the sulphate of quinine and manifested no more tendency to return."

We should be glad to record the experience of other observers, not only with the eucalyptus globulus but also with cincho-quinine—a new product, which is very highly spoken of—in malarial affections.

MAP OF LANCASTER, KY.

SHOWING THE LOCATION OF EACH CASE OF CHOLERA

1873.



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THE AMERICAN PRACTITIONER.

OCTOBER, 1873.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

A HISTORY OF CHOLERA AT LANCASTER IN 1873.

BY WM. BERRY, M. D., AND F. C. WILSON, M. D.

The town of Lancaster is situated near the center of Garrard County, Ky., five or six hundred feet above the level of Louisville. The stone near the surface is gray limestone, covered with a tough clay soil, such as is usually found in the "Blue-grass Region" of the state. The ground upon which the place is built is undulating, the court-house square marking the highest point, from which the surface slopes in every direction, affording fine natural drainage. The water-supply is from several wells situated usually in low places, where at every rain they receive the washings from a large surface of ground. In the eastern portion of the town a small branch, commencing near the cemetery (see accompanying map), passes down through a low, marshy lot overgrown with tall grass, and crosses Richmond Street through a culvert, continuing in a direction parallel to the Sugar-creek Pike. On the bank of this branch where it crosses

Richmond Street is the Tate well. On either side of the ravine, through which the branch runs, a large number of shanties and hovels are built, usually upon low ground, no provision being made for ventilation beneath. These were occupied by negroes, and were generally kept in an exceedingly filthy condition. Upon the branch at the point marked *L* was placed a slaughter-pen, the stench from which could frequently be perceived in the center of the town. The sanitary condition of the town was found to be wretched, no effort having been made to clean the streets and alleys, nor had the privies and stables received proper attention.

The first deaths from cholera occurred on Friday, August 15th, and were those of Isham Jenkins, colored, and William Turner, white. Mr. Turner was the father-in-law of Mr. Bewley, who, coming from Jonesboro, Tenn., was taken sick on the way, and stopped at Mr. Tate's, marked 2 on the map. Here he was visited by Mr. Turner, who remained with him several days, and on starting home was taken violently ill when a few miles from town, and was carried to the house of a negro man, where he died of cholera the same day. Isham Jenkins, who had waited upon Mr. Bewley, carrying out the discharges, was also attacked with cholera, and died in ten or twelve hours. He was said to have eaten largely of green corn, and had stood for several hours in a pond washing a buggy.

Until the occurrence of these cases there was no suspicion that Mr. Bewley had cholera, though the physician attending him said that his attack so much resembled cholera that he would have considered it such had there been any cases in that section. From the description given us the discharges certainly very much resembled those of cholera; and though the patient seemed to be better for a few days, he fell into a typhoid condition, and finally died. No care was taken to disinfect the discharges, which were thrown out in the rear of the lot. This was upon the hillside immediately above the Tate well, which, being located in the hollow, at each rain was nearly filled by the washings from privies, stables, hog-pens, and out-houses on every side. Isham Jenkins used water from this well. On Saturday there were no deaths, but on Sunday Fanny Bailey, colored, who lived with her mother in the shanty marked 3, was taken sick and died the same day of cholera. The house was low, damp, and in an exceedingly filthy condition. On the following Wednesday her mother also died of the disease. Both used water from the Tate well. There were no more deaths then until Tuesday, when Cary Burnside, who lived in the room adjoining the one occupied by the Baileys, was attacked and died in ten or twelve hours, as did also Susan Carr, who lived on the same square at Mr. Gallagher's, marked 7, and Martin Hickman, living in another room adjoining the Baileys. Sally Hogan, living further down the ravine at 6, was also taken sick and died the same day. Out of twenty persons occupying the four rooms in this group of houses four died of cholera, and several others were more or less affected with diarrhea. On Wednesday Mrs. Collier, living at 9, but who had left town the day before, was taken sick and died in twelve or fourteen hours; as did also Antony Smith, who lived further down the ravine, at the house marked 8. On Thursday there were five deaths. First, Sam Salter, who lived at 10, and used water from the Tate well, was taken sick and died, having been nursed by his wife Edna and sister Alice, the discharges being thrown into the privy used by the two women. Second, Frances Bailey, mother of Fanny Bailey, was taken sick and died in the same room, marked 11. Third, Bell Soper, living at 12, but who left town on Tuesday, died at Camp Nelson. Of the fifteen persons occupying this group of houses, marked *Q*, one died of cholera, and three others had violent vomiting and purging, but recovered. They all used water from the Tate well. Fourth, Anderson West, who lived on the other side of town, at 13, and who, so far as could be ascertained, had not been near any cases, died after a short illness. Fifth, Wilson Logan, the husband of Sally Logan, who died at the house marked 6, was taken sick in the same room and died in twelve hours. The house containing three rooms, low and damp, but kept clean, was occupied by an aged couple with several children and grandchildren. Of the seven or eight persons two died of cholera; the two old people remained in the house suffering for several days with nausea, vomiting, and diarrhea, as did also the son of the woman who died, while two others left town and had no symptoms of cholera. On Friday Mrs. Temple, who lived at 15, and who had left town with her family, was taken sick and died. One son also had diarrhea, but recovered. On the same day Edna Salter, the wife of Sam Salter, who died on Wednesday, was taken sick at the house of her father, Moses Doty, and died that night. Moses Doty's house was on the other side of town, at 16, near a branch somewhat marshy. The discharges from Edna were thrown into the privy used in common by Moses Doty and his next neighbor, Ned Cecil. Alice Salter, who had also helped to nurse her brother Sam, went home to her husband's house, marked 17, where she was taken sick and died in twelve hours. The discharges were carefully disinfected and buried, and no other cases were developed in her family. On Saturday Mr. Brown, the miller, who boarded at 18, was attacked and died in ten hours. He was very dissipated, and had been drunk for a week before his attack. His discharges were disinfected with carbolic acid and buried. In the same house were four or five other persons, none of whom were affected except the landlady, Mrs. Bishop, who was sick for several days with nausea, diarrhea, and vomiting, but recovered under treatment.

Ned Cecil, who lived next to Moses Doty, and who had used the privy into which the discharges of Edna Salter had been thrown, was taken sick and died in the bank-building, marked 20. On the same day Hayden Spoonamoore, who had worked at the bank-building, boarding at the hotel marked *S*, was taken sick in Lincoln County and died of cholera. On Saturday night, at 9 P. M., Rushbrook, a soldier, living at 21, in quarters clean and well policed, was taken with symptoms of cholera. He was treated with chloroform, camphor, and laudanum-mixture, together with the external application of heat and mustard poultices. At 5 A. M. his temperature was 97°; purging and vomiting excessive, with violent cramps in the muscles of trunk and limbs; surface cold and livid; skin shriveled; entire suppression of urine. We saw the case with Dr. Jackman and Dr. T. S. Warren, A. A. Surgeon U. S. A., and upon consultation it was agreed to give hypodermically one fortieth of a grain of atropia. By this the cramps were controlled, and the temperature rose to 99°, though there was still no secretion of urine. At 8 A. M. the surface again became livid and the breathing short, and he died at 8:30 A. M. His wife was seized at 2 A. M. with violent cramps, vomiting, and purging, the discharges being a rice-water fluid. At 5 A. M. her temperature was 96°; at 5:30 A. M. 95°, at which time there was given hypodermically one fortieth of a grain of atropia with one fourth of a grain of morphia. At 8 A. M. her temperature was 97°; pupils not dilated. At 9:30 A. M. all her symptoms were worse; temperature 95°; suppression of urine complete; gave one fiftieth of a grain of atropia. At 10 A. M. temperature 97°; at 10:45, 98¼°; at 11:15, 100°, but pulse weaker; lies quiet, with no vomiting or purging; still not a drop of urine in the bladder. Ordered ten drops tinct. digitalis to be given every two hours. At 12 M. temperature 101°; lies quiet, with no more vomiting or purging. At 1 P. M. her temperature was 103½°; breathing quick and superficial. In this condition she remained, gradually sinking until 2 P. M., when she died. Both these patients, living in a high, clean locality, used water from the Tate well.

On Monday Mrs. Sellers, who for several days nursed Mr. Bewley, was taken sick and died in the country of cholera.

On Wednesday Moses Doty, the father of Edna Salter, who died at his house, was taken sick at twelve o'clock at night with violent vomiting, purging, and cramps. He had been complaining for several days before, but had taken nothing. At 2 A. M., when we saw him first with Dr. S. L. Smith, his pulse could scarcely be felt. His temperature was 97° in axilla, under the tongue 96.6°, and in the rectum 102°. He had voided a short time before a very small quantity of urine. We gave hypodermically atropine and morphine. At 3:50 A. M. his temperature in axilla was 96.6°, in rectum 102°, and there had been no more vomiting or purging. At 4:30 A. M. temperature in axilla 98°, in rectum 102.8°; at 5 A. M. temperature in axilla 100.4° The catheter obtained only a few drops of urine. Without any more vomiting or purging he passed into a state of complete collapse and died at 9 A. M. On the evening of the same day Mrs. Finley, the daughter of Mr. Singleton, died in the country after an illness of twenty-four hours. She was attended by Drs. Frazee and Pettus, who pronounced it a well-marked case of cholera. The Singleton family lived in the house marked *P*, opposite to the Tate well, from which they obtained water. Underneath the house the ground was low and wet, so that it had to be drained. The children occupied the second story. On Tuesday the whole family, consisting of Mr. and Mrs. Singleton, with four children, moved four miles into the country to the house occupied by their married daughter, Mrs. Finley. This house stood upon the top of a high hill. Here Hunley Singleton, who had been troubled with diarrhea since the day before he left town, was taken sick on Monday, having violent vomiting, purging, and cramps, with great prostration and complete suppression of urine for forty-eight hours. He was seen by Drs. Hill, Pettus, Frazee, and Berry, who pronounced it a genuine case of cholera. Under treatment he recovered. At the same time his brother and sister were seized with choleraic symptoms, though in a milder form, both recovering. The discharges at first were voided in the privy used by the family. Mrs. Finley and her husband remained only a few days, moving to a house about a mile off, where she died on Wednesday. She had not been to town for two or three weeks. Her husband on the next day was seized with nausea, cramp, and diarrhea, with every indication of impending cholera, but was promptly relieved by the hypodermic use of atropine.

On Friday Eugene Hasbrouch, a soldier, died after an illness of eleven and a half hours; and the same day another soldier, Herman Rathjen, was seized and died the next morning. The latter had been in close attendance upon the first two cases that died in camp, while the former had only passed through the room in which they died. In the case of Hasbrouch the temperature was as low as 96°, reaching before death as high as 102½°; while in the case of Rathjen the temperature was not at any period lower than 99°, and reached before death 103½°. In both cases the discharges were distinctly rice-water in character, the pulse scarcely to be felt, the skin livid and shriveled, and the urine completely suppressed. In both cases the atropine given hypodermically controlled the cramps, though it had no effect upon the action of the kidneys. We saw the cases in consultation with Drs. Warren and Smith.

French Smith, a feeble old negro man, who lived at 28, a law-office, died after an illness of forty-eight hours, his discharges and vomit being rice-water in character and very copious. He at first suffered severely with cramps, which were controlled by atropine. His temperature at one period was 96°. That morning we were called to see Reilly Burdett, two and a half years old, the child of a man who had nursed nearly all the cases, and who lived in a house, marked 27, which stood on a low, damp lot, much lower than the level of the street, which had been filled up in grading. His symptoms were those of well-marked cholera, and he died the same night after an illness of twelve or fourteen hours. The discharges, received upon cloths, were at first merely washed out in water, which was thrown into the back yard. After we saw him care was taken to disinfect and bury them.

On the following Wednesday Ellen Lusk, the grandmother of the child, living on the other side of the town, at 30, but who during the sickness of little Reilly had been with him a great deal, was taken sick, having what appeared at first as a bilious diarrhea. Toward evening, however, the discharges and vomit became rice-water, and she sank rapidly, dying at about twelve oclock that night. The temperature in this case was at no time below 98°. Atropia was used in sufficient doses to control the cramps, and opium, quinine, and calomel had been given by Dr. Jackman, but was rejected by the stomach. Upon consultation it was determined to resort to the transfusion of milk. Having to improvise an apparatus, the necessary preparations were not completed until 11:30 P. M., at which time the patient was pulseless, could only speak in a husky whisper, and was so weak as to be unable to raise her head. It being impossible, because of her dark color and the lateness of the hour, to find the cephalic vein, the median cephalic was exposed, the tube inserted, and milk fresh from the cow, and kept at the temperature of 100°, was slowly passed into the vein. In five minutes six or seven ounces had been transfused, when the pulse became moderately strong, the voice returned so that she could be heard in the adjoining room, and her strength was increased so that she partially raised up in bed and turned over on her side. The movement of the arm threw the tube out of the vein, when we determined to let her rest for an hour, and then procure more fresh milk with which to repeat the injection. At the end of half an hour she was found sinking rapidly, and before the preparations could be made she was dead. A pint and a half of milk had been prepared, but not more than six or seven ounces were thrown into the vein.

The next day Chany Dunn, a negro woman living diagonally across the street, at the house marked 32, and who had been sick with rheumatism for two months, was seized with diarrhea, which at first was of a bilious character. It soon developed into well-marked cholera, having the characteristic discharges, with severe cramps, cold surface, temperature reduced to 95½°, and suppression of urine. She died about twelve o'clock. Ellen Mason, living at the house marked 33, died the following morning after an illness of twenty-four hours. This was the last death that occurred. Mrs. Stevens, who lived at 30 in the same house with the family of Mr. Collier, and who had left town, died in the country on the previous Tuesday. Her husband also had a mild attack, but recovered.

The first case that recovered was that of William Arnold, the undertaker, living at the house marked *R*. He had for several days suffered with a diarrhea, which he had somewhat checked by a mixture of chloroform, camphor, and laudanum. On Sunday morning, when first called to see him, we found his temperature 97°, his pulse very weak; and he was excessively emaciated, though he had no nausea and no pain. His evacuations were frequent and very thin, but somewhat colored. Ordered to continue the mixture and take five grains of quinine every four or five hours. 8 P. M.: He has had five or six thin, watery actions since morning, and vomited freely once. Ordered to continue the mixture, adding fifteen drops of laudanum to each dose. 10 P. M.: Has had a severe cramping spell; temperature 95°; thirst excessive; surface cold, clammy, and livid; skin of hands and feet shriveled. He can only speak in a whisper, and his kidneys have not acted since 5 P. M. We gave hypodermically one fortieth of a grain of atropine with one fourth of a grain of morphine, and in fifteen minutes he said he felt easy and comfortable. He was then ordered a mixture of white of egg, water, and whisky, to be given at frequent intervals. During the night he slept a little, his bowels moving only once. The evacuations were copious and thin, like rice-water, but he had no vomiting or cramping. 8 A. M.: Temperature 97°; pulse very feeble; says he feels a little better; still no urine secreted. We repeated the injection of atropine, omitting the morphine. 4 P. M.: Temperature 101°. He still has passed no urine. Ordered

R. Spts. nitrous ether, . . . ℥j;
Infusion digitalis, . . . ℥vij.
M. S. One ounce every two or three hours.

Tuesday morning: His kidneys acted this morning; bowels moved only twice, the actions being better in consistence and color; temperature 98½°; appetite returning, and he feels better. He rapidly convalesced, and in two or three days was on the street.

On September 4th Frankie Burdett, the daughter of Ellen Lusk, who died on Friday, and the mother of Reilly Burdett, who died on Wednesday, was taken with a diarrhea, the passages not becoming watery until that night, when she had four or five, the last two very copious and resembling soapsuds. We saw her the next morning at 9 A. M. Her kidneys were very inactive, though she had passed a small quantity of urine. This, upon microscopic examination, disclosed tube casts. Her temperature was normal, her pulse moderately full, tongue flabby and coated, and she complained of a bitter taste in her mouth. She suffered some pain in the bowels, and had some nausea, but had not vomited. She complained of an intense itching in her hands and feet, the same thing having been noticed in the case of Ellen Lusk, her mother, and her child. She also complained of cramp in one leg. We gave hypodermically atropine and morphine, and ordered five grains of quinine to be taken every four hours. 4 P. M.: She has been easy all day. Her bowels moved at 3 P. M. for the first time since morning, the evacuation being thin and rice-water in character, and in quantity sufficient to fill a large chamber. At 7 P. M. she had taken two doses of quinine;

temperature still normal; has no pain except an occasional cramp in the leg; no more urine secreted. The quinine producing some nausea, it was discontinued, and she was ordered to take ten grains of calomel every hour. At 10 P. M. she had taken only two doses of calomel. Her pulse was weaker, though the surface was warm, and she complained of some pain in the stomach. An evacuation just passed is large enough to half fill the chamber, and is distinctly rice-water in character. Ordered to continue calomel in same doses. At 1:30 A. M. she vomited freely, the matter thrown up being slightly tinged with bile. Her temperature was 100°, and she had passed no urine since the morning before. She has not complained of much pain, except an occasional cramp in the bowels and in one leg. Her knees are cold though her feet are warm. Her bowels have just moved, the action being copious, looking like soap-suds, a shade darker than the others. Gave atropine hypodermically, and ordered another dose of calomel to be given at 2:30 A. M. After taking the last dose she slept the rest of the night. On this morning at 7 A. M. her temperature is 98°; her pulse 68, and moderately strong; her kidneys have acted, her appetite has returned, and she feels much better. She recovered rapidly and was up in a few days.

Two other cases—those of a soldier by the name of Graff, and a negro woman living at the hotel marked *S*—were treated with atropine and calomel by Drs. Smith and Warren. They both had all the symptoms of genuine cholera, and both recovered.

There were seven well-marked cases in all that terminated in recovery. In one of these there was suppression of urine for forty-eight hours, and in several others for twenty-four hours. In six of the seven atropine was used hypodermically in doses sufficient to control the cramps and produce reaction in the temperature. Three of the cases were treated, in conjunction with atropine, by calomel, given in doses of ten grains every hour, until the vomit and discharges showed the presence of bile. The calomel was then discontinued, and five grains of quinine were given every three or four hours. One was treated by atropine alone until reaction occurred, when it was followed by infusion of digitalis and sweet spirits of niter. Three of the cases were treated with calomel and opium in combination.

Living in the immediate neighborhood of the Tate well, at the houses marked *M, N, O, P*, were four families, two of whom used water from the well, while the other two did not. Of the two who used the water, in one family there were three cases, while in the other every person in the house was more or less affected with diarrhea. In the two families who did not use the water there was not even a case of diarrhea.

We prescribed for a large number of cases of simple diarrhea, frequently accompanied with nausea and vomiting. They were, as a rule, easily controlled by an opiate and astringent, followed by quinine; as almost invariably the tongue presented that peculiar appearance which is indicative of a malarial influence. In cases where the cramps were severe, and the surface already cold and clammy, atropine and morphine were at once administered hypodermically, usually affording prompt relief. By resorting early to treatment no doubt many cases were checked in the first stage.

To sum up: of the first twenty-three cases that occurred there was not a single recovery, while of the remaining seventeen well-marked cases ten ended fatally and seven recovered. Of the forty cases, twenty-five were black and fifteen white; twenty-one of the blacks dying, while four recovered; twelve of the whites dying, while three recovered. All of the cases were adults with the exception of one child aged two and a half years.

LOUISVILLE.

ON THE TREATMENT OF YELLOW FEVER.

BEING A SERIES OF REPLIES FROM DISTINGUISHED PHYSICIANS TO THE INQUIRIES ON THIS SUBJECT OF PROF. JOSEPH JONES, M.D., OF NEW ORLEANS.

[The very original papers on yellow fever which have appeared in this journal from the pen of Prof. Joseph Jones are fresh in the minds of our readers. Prof. Jones addressed letters to a number of his medical friends South who had encountered epidemics of yellow fever, making inquiry as to their mode of treating the disease. Answers to some of these letters have been received and kindly forwarded to us by Dr. Jones. In view of the sudden outbreak of the scourge in Memphis, Tenn., Shreveport, La., and other southern towns, we have made an abstract of the letters of several well-known southern physicians, and make room for it here at the expense of space which had already been filled with other matter. The exigency of the times makes such an article exceedingly opportune.—EDS. AM. PRAC.]

J. C. FAGET, M. D., of New Orleans, writes: "My past experience in the treatment of yellow fever has not been as satisfactory as I could have desired; but theoretical considerations lead me to wish in the future to make careful trial of the alcoholic treatment as proposed by Todd in pneumonia. After opening the bowels by gentle purgatives, and maintaining the functions of the kidneys and skin, I should give from the start cold lemonade, to which small quantities of wine had been added. After the febrile action has attained its highest point, as shown by the thermometer, I would increase the quantity of alcohol by substituting brandy or gin for the wine as soon as the pulse falls to 100 a minute, especially if this was attended with a like fall of the temperature. We must of course maintain this medication within wise limits. We must endeavor to adapt the treatment to the peculiar constitution and vital endowments of the patient, while at the same time we do not lose sight of the powers of nature and the different manifestations of the disease. In the epidemic of 1847 leeches and blood-letting even to excess appeared to be beneficial; in 1853 purgative medication had more advocates."

JUST FOUATRE, M. D., of New Orleans: "I recognize three forms of yellow fever: 1. Where the temperature does not exceed 40° C. All patients of this class, unless over fifty years of age, recover without treatment. 2. Where the temperature exceeds 40° C. without reaching 41° C. This is a graver form of the affection, where great good may be accomplished by appropriate treatment. 3. Where the temperature reaches at the commencement of the hot stage 41° C. According to my observation, all of this class die, whatever the treatment adopted. My efforts are directed, in general terms, to reducing the temperature of the body, restoring the power of the heart, and exciting the capillary circulation. To effect these results I use digitalis, veratrum viride, and alcohol, either singly or combined, according to the nature of the case. I next endeavor to diminish the heat of the surface by general sponging with cold water, to which vinegar or tincture of camphor has been added. The strength of the patient should be sustained from the beginning with beef-tea, wine, etc. As soon as the fever declines I increase the quantity of food, administer tonics, and stop the sedatives."

A. C. HOLT, M. D., of New Orleans: "Of the three great organs—liver, skin, and kidneys—which come to the rescue of the sufferer from yellow fever I place the liver as first in importance. Acting upon this belief, and to insure as far as practicable the proper action of this organ, it has been my uniform practice, first instituted in 1844, to administer as early as possible in the attack, and rarely after twelve hours have elapsed, one large dose of calomel, which is permitted to remain undisturbed seven or eight hours, at which time the bowels should be moved by an infusion of senna and manna. After this it is only necessary to keep the bowels in gentle action by effervescent salines or castor-oil, if not contra-indicated. During the febrile stage I order as nourishment barley-water and milk. The rationale of this treatment is that rapid and violent purgation, which I think undesirable, is avoided, the liver and portal circulation are emulged, and a gentle mercurial excitement established, which does no possible mischief, disappearing with but continuing through the attack, and which renders stimulants in the second stage unnecessary. If this dose of calomel is given late in the attack, it is apt to act as a purgative, and thus the great object is defeated; if given at the outset, it rarely if ever has done so in my experience.

"The changes in this disease are so rapid and radical that decided medication is unsafe, and certainly unavailing after a few hours have passed. I have observed that quinine acts better in some epidemics than in others, and with different results during the same epidemic. Thus in the early part of 1853 it acted well in combination with calomel; later in that epidemic I saw bad results due to it, and discontinued its use. In 1867 we had an epidemic in which local congestions were of frequent occurrence, and hence quinine was indispensable.

"In an epidemic in Woodville, Miss., in 1844, when I first took an active part in the treatment of yellow fever, blood-letting was generally and freely practiced, by venesection, by cups, and by leeches; and while deprecating the indiscriminate use of this agent, powerful alike for good and evil, my observation of its effects during that epidemic has prevented me from viewing it as a remedy so doubtful or so hazardous as to merit total abandonment.

"Early in the epidemic of 1853 I saw a young man overwhelmed by the intense excitement of his attack, and die in six hours in convulsions. A few minutes later I saw a lady of delicate physique, six months advanced in pregnancy, laboring under the same intense fever and threatening symptoms. I lost no time in bleeding her freely from the arm, and had the pleasure of seeing her make a happy and speedy recovery and go to her full term. I am sure she must have died but for the blood-letting. I present these as examples of the class of cases in which I would resort fearlessly to venesection in yellow fever, and as justification of the plea which I use in behalf of the judicious use of the lancet in this disease. I know of no other agent capable of controlling the intense and destructive excitement in those overwhelming attacks which we all meet with now and then during our great epidemics. There are many adjuvants of great value in promoting the action of the skin and kidneys, such as sponging with tepid acidulated water, cold-water enemata, etc."

Prof. D. WARREN BRICKELL, M. D.: "1. Yellow fever being, in my opinion, as strictly a zymotic and self-limited disease as scarlet fever, measles, etc., I believe it the highest wisdom not to attack it at all. I do not believe it to be *curable.* I have seen, and expect to see again, many cases passing safely through the attack without a dose of medicine.

"2. As a general rule, if I see the case early, I give a gentle purgative. If my patient had eaten a hearty meal just before the attack, as not unfrequently happens, I would give an emetic. These measures are simply with a view of preparing the patient to pass safely through the attack.

"3. The points to be achieved are absolute physical rest, mental quietude, and the maintenance of the functions of the skin and kidneys. Necessary to this end are cleanliness, good nursing, pleasant drinks, and good ventilation.

"4. The complications of yellow fever call for the greatest activity of the physician, and these must be met as in other zymotic diseases; always remembering that the poison of yellow fever strikes gravely at the nerve-centers, and that depressing or highly perturbating medicines must be avoided. Local blood-letting may be carefully resorted to, to relieve local congestions, with advantage in some patients; general blood-letting never.

"5. Quinine is not curative; though if given early in the attack with judgment it calms some cases, reduces the heart's action, and indirectly regulates or maintains the functions of the emunctories. Only large doses have this effect. But quininism is wholly inadmissible in many cases, and the only way I can explain this is to say there are cases which from the beginning are too profoundly impressed by the poison to permit the use of even as favorable a sedative as quinine in large doses. The instinct of the physician marks out such cases.

"6. Opiates generally are not admissible save in the early stage, and then in combination with quinine. Late in the disease, and whenever restlessness supervenes, they should be given cautiously, as they are apt to paralyze the nerve-centers. I have lately found chloral valuable in a few restless cases, and shall try it more freely."

Prof. L. A. Dugas, M. D., Augusta, Ga.: "'Yellow fever is a self-limited disease, and can not be arrested by drugs.' This was abundantly demonstrated to me by the epidemics of 1839 and 1854 in this city. The study of these two visitations also established the fact that the type of the disease may be very different. In 1839 the arterial or febrile excitement was excessive, and persisted through the whole disease, whereas in 1854 general depression was the most striking feature. Therefore while stimulants were manifestly injurious in the one they were beneficial in the other epidemic.

"I concur with you in the belief that efforts to promote the action of the skin and kidneys, at the same time that proper nourishment be allowed, constitute the best treatment. I prefer enemata to purgatives to empty the bowels. I have tried quinine more or less freely, and have no reason to think that it ever did any good, while I sometimes thought it injurious. I am opposed to depletion of all kinds, as the patient needs all the resources of his system to withstand the conflict. The paramount importance of rest shows how little the system can spare its powers. Sleeplessness should be overcome by the least enervating means. Hence opium is preferable to morphia. Perhaps chloral hydrate would be better than either if discreetly used. As a general rule, I have prescribed lemonade or other vegetable acids freely, with a view to act upon the liver and kidneys; but I have sometimes found that when these failed that the use of the bicarbonate of soda would act well upon the urinary secretion. This was more especially the case in the stages of convalescence.

"One of the most important measures of relief is to be found in the very early removal of the patient from the infected district to a purer atmosphere. While very few of those thus early removed would die, the converse obtained with those who remained exposed to the respiration of the poison. I need scarcely add that such removal, if delayed, may become injurious by inducing fatal exhaustion."

W. H. HUGER, M. D., Charleston, S. C.: "1. Yellow fever is a self-limiting disease, and can not be arrested by drugs. Black vomit is the result of the poison in the blood, causing a hemorrhage into the stomach; consequently it is not the cause of the disease.

"2. Gentle but efficient purgation in the early part of the first stage of febrile excitement is desirable. Blue mass, in a small dose of submur. hydrarg., followed by a gentle aperient.

"3. During the febrile excitement employ such measures as will equalize the circulation and promote the regular and free exercise of the functions of the skin and kidneys: mild diuretics, lemonade, orange-leaf tea, water with carbonic acid, etc.

"4. Diet should be nutritious but light: beef-tea, gruel, etc.; no solid food until convalescence is well established. Use alcoholic stimulants with caution. Good champagne is one of the best because of the carbonic acid which it contains.

"5. Quinine has never in my observation aborted the disease, nor have I witnessed any benefit from its administration.

"6. Blood-letting I believe to be injurious. Sinapisms and hot mustard foot-baths are preferable.

"7. Opium should be used with much caution; it is potent for evil.

"8. Every case of yellow fever should be considered as serious, however slight the symptoms may appear, and should receive the closest medical attendance and nursing, and the maintenance of absolute rest in the recumbent position.

"9. The maintenance of free ventilation, and at the same time guarding against changes in temperature.

"10. The complete suppression of urine in yellow fever is the most alarming symptom—more so than black vomit—and is generally followed by restlessness, delirium, coma, and convulsions. Counter-irritation and the continued use of heat and warm fomentations are alone indicated to combat this formidable symptom."

W. E. Bondurant, M. D., Natchez, Miss.: "During the year 1871 a very extensive and fatal epidemic of fever prevailed, and in this I had a large experience. Although all the physicians here, I believe, were united in calling it yellow fever, with all respect for their collected opinion, my own observations of it compelled me to differ with them, and to regard it as an epidemic of malarial fever, manifesting itself in the three forms of remittent, typho-malarial, and pernicious. I was the more firmly convinced of the correctness of this opinion by the fact that most of my cases which assumed the first two of those forms yielded promptly to quinine, and those of the latter form, while in the collapsed state, generally reacted quickly under opium, and were then soon brought round by quinine.

"At the time we had the epidemic I have mentioned here the same disease prevailed at Vicksburg, and there, I understand, several prominent physicians disputed its yellow-fever nature. We had causes enough here and in Vidalia to account for an epidemic of malarial fever in the unusual upturning of earth which was going on pretty constantly in both places during the latter part of the summer and fall of 1871. Yellowness of the skin and black vomit belong, I am convinced, as much to malarial as to yellow fever; and in 1871 I saw well-marked cases of the former disease in the country before the epidemic was announced in town—one victim had not been there for a year previous—where both these symptoms were present.

"I send you this in default of my experience in real yellow fever, which has been so small as to afford me nothing as regards its treatment that could interest you."

ON DISEASES OF THE PHARYNX.

BY RICHARD C. BRANDEIS, M. D.

The prevalence of pharyngeal affections in this part of the country will be a sufficient apology for some remarks on the subject, common as it may be. I would only say that though these affections are generally quite tractable, and for the most part present no dangerous complications, still we occasionally meet with cases which are not so easily overcome, and which exhaust the patience and resources of both physician and patient. Often the local diseases are but manifestations of serious constitutional disorders. I need only remark what excessive febrile symptoms a simple pharyngeal catarrh gives rise to in children and often in grown persons; that diphtheria may be accompanied by a fatal fever, even though the inflammatory process be confined to the pharynx and respiration be not interfered with. Even when the coincident fever is only of short duration, and the inflammatory process has been entirely removed, very serious complications follow in the wake of this disease. The paralysis of the soft palate and of the pharyngeal muscles may be due to the disturbed innervation of the muscular fibers involved in the inflammatory process.

The importance of the pharynx as a seat of disease may also be inferred from the fact that it is implicated in the majority of acute febrile affections, as in scarlatina, variola, and rubeola, and very often in typhoid and erysipelatous fevers. It is well known that during great nervous excitement, and in all cases of narcotic poisoning, a certain dryness and irritation of the throat is experienced.

The value of the pharynx as a diagnostic medium must not be overlooked. Just as we first diagnosticate scarlatina by the peculiar appearance of the pharynx, an examination of the pharynx will give us proof of the existence of scrofula, of syphilis, and sometimes of tuberculosis. Constitutional diseases are also reflected on these organs.

The pale granular swelling of the fauces and pharynx, with the general accompaniment of hypertrophied tonsils, are peculiar to scrofula. We determine the presence of the most inveterate form of syphilis from the appearances of ulcerations or cicatrices. There is a peculiar form of this disease which only manifests itself by means of continually recurring pharyngeal ulcerations. Heroic applications of mercury do not afford so much benefit as smaller doses. In spite of the iodides there will be continued relapses, and a speedy treatment is of greater consequence than an energetic one.

The pharynx is also affected in the latter stages of phthisis.

I do not dare to say that the circumscribed reddening of the anterior fauces is characteristic of this disease, any more than are the red borders on the gums or the peculiar claw-like form of the finger-nails. But ulcerations present themselves which arise out of yellowish, hypertrophied nodules, which become confluent, and give rise to a very jagged, uneven ulcer. In such cases it is always doubtful whether the pulmonary affection is not complicated with syphilis.

There is a peculiar disease of the pharynx which is characterized by the marked dryness of the purple, hyperæmic, but slightly swollen mucous membrane. Spreading ulcers gradually form, extending to the epiglottis, which they finally destroy, reaching the larynx at last, and are not benefited either by astringents or antiphlogistics. The local affections of the palate and pharynx are generally catarrhal, with greater or less implication of the submucous tissues and tonsils. The participation of the latter is in itself conducive to a constitutional disturbance.

The current phrase, granular pharyngitis, is a very unfortunate one. Granular enlargements are observed in various affections, and possess no diagnostic value. Those catarrhs in which large, flat elevations appear in the pharynx are very obstinate. They may be obstructed gland-ducts, and are generally so hidden behind the faucial pillars that a cursory examination may fail to discover them.

Besides constitutional disorder, the diseases of the pharynx are due to different local injuries, such as burns or swallowing corrosive substances. The immoderate use of tobacco in its different forms, of malt or alcoholic drinks, prolonged vocalization or declamation, are also productive of pharyngitis. Direct and indirect exposure to cold will also give rise to pharyngeal affections. The neck may be primarily affected, or the complaint may be transmitted from other organs. The nasal mucous membrane is very often the original seat of the disease, which extends to the pharynx. If these catarrhs follow each other in rapid succession, they are pretty sure to become chronic.

It is not necessary to enumerate the symptoms of these diseases; the most evident alterations are readily seen with sufficient illumination. We thus determine the degree, the seat, the acute or chronic form, and the particular nature of the disease, and often see the quality of the secretion. The purulent forms generally give rise to a fetid breath if the secretion be retained between the mucous folds at each side of the larynx. Such secretions collect during the night, particularly in persons who use tobacco, wine, beer, etc., and the effort to expel the phlegm causes retching and vomiting. The irritation of the mucous membrane causes repeated acts of swallowing, and thus a considerable quantity of the secretion enters the stomach, giving rise to nausea and vomiting, which may lead to an erroneous diagnosis of gastric catarrh.

Some months ago a lady, aged fifty-four years, came to me with the following history. She stated that for nearly eighteen years she had vomited daily in the morning and generally after each meal. Several physicians had treated her during that time for divers gastric troubles, but without any benefit. I examined her throat and larynx with the laryngoscope, and found marked hypertrophy of tonsils and of the mucous membrane, which extended down below the vocal chords. Engorgement of the veins was marked, as well as enlargement of the papillæ at the base of the tongue and in the sinus pyriformis of either side. The patient objecting to constitutional remedies, I was induced to try local treatment. I applied weak solutions of nitrate of silver and iodo-carbolized glycerine by means of a brush, and relieved the patient entirely after ten or twelve sittings. She is now entirely free from the trouble. I have had since several cases in which similar symptoms presented themselves in a milder form. A few weeks ago a young lady came to me complaining of obstinate and chronic vomiting, which had resisted all medica tion. On examination I noticed a slight pharyngeal catarrh, and the patient complained of a constant irritation in her throat, but was not conscious of repeated attempts at deglutition. Shortly after this an acute pharyngitis came on, accompanied by severe tonsillitis. This prevented the continual swallowing, and the vomiting at once ceased. I now convinced the patient of the correctness of my diagnosis, treated her pharynx, and her trouble has entirely disappeared.

The affections of the pharynx may be transmitted to the ear by means of the eustachian tube, as well as to the larynx. I have no doubt that the majority of aural catarrhs, accompanied by disagreeable noises and deafness, are due to a preexisting disease of the pharynx; and the only rational mode of treatment is first to remove the naso-pharyngeal affection.

The connection between diseases of the pharynx and those of the respiratory tract is a matter of daily observation; on the other hand, there is but a single disease which spreads from the pharynx into the esophagus, and that is muguet or aphthous sore-throat. Inflammations and ulcers often extend into the larynx, and even into the bronchi. The entrance into the esophagus is only open during deglutition; that of the larynx is always so, being but partially closed during swallowing. The secretions of the pharynx flow down over the arytenoid cartilages and posterior wall of the larynx to the false vocal chords, and load the entire surface of the epiglottis. Acute pharyngitis, in which the submucous tissue is involved, often causes stenosis of the larynx and œdema glottidis. Since the introduction of laryngoscopy the presence of this complication is more frequently noticed than formerly. The commencement of this œdematous swelling is often observed on the mucous membrane covering the arytenoid cartilages and the ligamenta ary-epiglotticis. Dyspnœa only sets in during the later stages. A fatal issue may be prevented by an opportune scarification.

Nervous changes also present themselves in the pharynx;

such as hyperæsthesia, anæsthesia, spasmodic contractions, and increased reflex sensibility. The excited and depressed forms generally go hand in hand. The first are found in hyperæmic affections of the mucous membranes, but may also occur in more general nervous lesions, as in the general nervous irritation of hydrophobia. The latter forms are the sequelæ of inflammatory diseases or central nervous lesions. Atrophic degeneration is occasionally met with, and is diagnosticated by the peculiar paleness of the mucous tissue and the diminished bulk of the faucial muscles.

Paralytic affections of the pharynx are generally due to diphtheritis. The nasal voice, the difficulty of deglutition, regurgitation of fluids and solids through the nose occur in cases in which the velum palati is dependent and immovable. Progressive muscular atrophy often presents itself in the pharynx. I know of two instances, affecting elderly persons, in which the tongue, as well as all the muscles of the buccal cavity, were involved. The tongue was in constant vibration and could not be protruded between the teeth.

The purpose of this paper has been rather to draw attention to the importance of the diseases of the pharynx for their own sake, as well as for purposes of diagnosis, than to offer any thing novel in therapeutics; but I would lay stress on the importance of removing the causes of the trouble. The use of tobacco and spirits must be peremptorily forbidden. I would also insist upon the value of local applications—gargles, inhalations, pencilings, and cauterizations—as being attended with marked improvement. Inhalations of atomized fluids are very serviceable, and it is best to begin with a solution of common salt, and gradually use either tannin or alum. The prominences of the mucous membrane may be touched with strong solutions of the nitrate of silver (forty to sixty grains to the ounce of water). Sulphurous waters act very well in inveterate forms of pharyngitis.

LOUISVILLE.

REMARKS ON ENTROPIUM, WITH CASES.

BY DUDLEY S. REYNOLDS, M. D.

There are three forms of entropium in the upper lid that call for very different plans of treatment, each requiring some sort of operation adapted to the peculiar conditions present. I shall endeavor to point out the distinguishing features of the three forms of the disease, and shall illustrate the proper treatment by cases belonging to each class as they have occurred in my practice.

The three prime factors in the production of entropium of the upper lid are, first, spasm of the orbicularis palpebrarum muscle, which when strongly contracted naturally tends to advance toward the edge of the tarsal cartilage, carrying the overlying loose skin over so far as to place the free border of the lid on the same plane with its inner or posterior surface, and holding the lash down firmly against the cornea. The second class depends upon shortening of the palpebral mucous membrane, whether from the destructive changes set up by inflammation, or, what more frequently happens, the application of caustics. In either case the effects are the same; namely, cicatricial deposit with persistent contraction, and more or less incurvation of the cartilage. The third condition is that which belongs almost exclusively to scrofulous subjects. It consists in sloughing away of small portions of the structures composing the orifices of the meibomian ducts, until gradually the lash droops from loss of substance below it, and so is brought very gradually into contact with the cornea; beginning with perhaps only a few hairs in the center of the lid, and extending slowly on as the destruction of the mouths of the meibomian ducts goes on. Now and then it may cease for many months, and by keeping the "wild hairs" plucked out the trouble seems trifling, until at last a little soreness, a sty or so, and then a few more "wild hairs" appear at a point where they had not been noticed before, and so it goes on to the production of complete inversion with the worst consequences.

The first form, or that which begins with spasm of the orbicular muscle, is likely to be misunderstood and treated by depilation alone; and so with both the others, until complete inversion takes place. In fact, blepharospasm is the one essential element that determines the condition in all cases known as entropium, except those cases of misdirected cilia from ulcerative processes in the posterior edge of the free border of the lids, which I have for obvious reasons included in this classification.

The indications of cure are perfectly clear when we come to a proper understanding of the nature of the disease. For example, the blepharospasm must be treated by division of the contracted muscle, incurvation must be overcome by such means as will secure a condition which makes inversion impossible, and inversion from loss of substance in the edge of the free border must be overcome by shortening the integument, and attaching it to the cartilage in such manner as to evert the lash and keep it everted. By way of illustration I will give a brief history of a few cases.

Case I. Mrs. C., aged thirty-eight years, has had sore eyes for six or seven years. During the last ten months she has been almost totally blind. By a note which she brought me from her family physician, Dr. McD., I learned that she had suffered frequent attacks of intermittent fever. When I first saw her both eyes were very nearly closed. Complete inversion of both upper and lower lids of each eye existed, so that no lash could be seen. Considerable contraction of the orbicular muscles, with adhesions between the lids at the outer canthi, prevented my making a satisfactory inspection of the eyeballs, but enough could be seen to establish the fact that considerable pannus existed in both corneæ.

On the 15th of April, 1873, after inhaling chloroform, she was operated upon. Commencing on the right eye, and dividing the palpebral fissure obliquely outward and upward quite up to the orbital margin, cutting through the entire width of the orbicular muscle, some of the lower lobe of the lachrymal gland lying exposed in the wound was snipped out with scissors. The skin and conjunctival membrane were then united along the entire line of division with silk sutures; one in the angle of the wound and one on each side, completing the closure, thus permanently extending the palpebral fissure. The next step consisted in cutting out a piece of skin from the upper lid, running from a point about one eighth of an inch above the ciliary margin directly above the punctum lachrymarium, along parallel to the margin of the lid, and terminating in the extended fissure. This piece of integument was about half an inch wide in the center, and tapered gradually to a point in the two extremities of the linear incision. The orbicular muscle lying at the center of the lid was raised with fine-tooth forceps and snipped out with scissors. This wound was then entirely closed by interrupted sutures. The next step consisted in dividing the skin and mucous membrane along the free border of the lid from the punctum to the external canthus, which allowed the portion containing the eyelash to roll up on the outer surface of the cartilage. Next the same sort of incision was made along the edge of the lower lid, then an elliptical fold of skin was snipped out with scissors, and this wound closed with silk sutures, which completed the operation for the right eye. The left was then treated in precisely the same manner, after which cold wet compresses of cotton-wool were applied and secured with a roller bandage.

April 16th—Mrs. C. quite comfortable; had a good night's rest; dressings removed; eyes look greatly improved; almost no swelling; wounds were all apparently united; dressings renewed.

April 17th—Patient doing well; dressings taken off; no swelling; stitches were all taken out; wounds all well united. Along the line of incision in the free borders of the lids there is pus. The pannus in both eyes has greatly abated. Ordered a wash of one drachm of alum to a quart of water, to be used every two or three hours.

April 18th—She says she feels quite well, and sees better than she has done for a year previous to the operation, being able now to count fingers at ten feet; continue alum-wash.

April 20th—Complains of dimness of vision; eyes look a little red; dusted dry tannin into both eyes, and applied cold compresses.

April 21st—She is vastly improved; applied tannin and compresses.

April 23d—She says she can see almost as well as ever she could; wants to go home. There being no appearance of the pannus, save a few fine vessels coursing over the upper half of the cornea of the left eye, I ordered cold alum-water ablutions, and permitted her to leave the infirmary on the next day.

This case was an aggravated form of the second class, and required something more than the removal of integument and the performance of canthoplasty; because the peculiar alteration that turned the free border of the lid on to the same plane with its posterior surface would have made the lash lie irregularly along the edge of the cartilage. For this reason free division was made along the edge, separating the skin and mucous membrane so that the portion containing the lash could roll up over the tarsal border; thus making it impossible for any of the hairs, though irregularly set, to come in contact with the cornea. A majority of the cases of pannus arise from entropium, and the particular feature of the entropium that results in the friction that produces corneal abrasion, followed by pannus, is the blepharospasm. In fact it is this persistent spasm of the orbicular muscle that produces the necessary pressure to make the friction capable of producing corneal abrasions in trachoma and papillary conjunctivitis. I attach so much importance to the blepharospasm as a leading feature of entropium that I feel almost constrained to mention some other cases of this second class, which is really the most complicated form, and yet is the one most frequently seen in practice.

Case II. Miss M. DeL., aged nineteen years, in moderate general health, has been "troubled with wild hairs in the eyes" since the age of twelve. She is evidently of strumous diathesis; has double rows of lashes in both upper lids; the posterior row turns completely in upon the cornea, while the anterior row hangs directly down, being also in contact with the surface of the cornea. There are numerous clear ulcers all about over the corneæ of both eyes.

On May 6, 1873, she consented to the operation without chloroform. With the assistance of my friend, Dr. D. Child, I cut out a fold of skin from the upper lid of the left eye, elliptical in form, and extending from the inner to the outer canthus, including at the middle portion the orbicular muscle, so as completely to expose the cartilage at this point; then closing the tegumentary wound with silk sutures, I divided the ciliary edge of the lid as described in Case I., connecting this line of incision at the outer commissure with the angle of the external wound. The eye was then closed with the ordinary compressive bandage.

May 7th—Miss DeL. called at my office. She says the bandage slipped in the night and came off. There being no pain in the eye—only a sort of burning sensation, which was not severe—it was not re-applied. I find the wound so far healed that the sutures are no longer necessary.

May 8th—She is greatly improved. Her eye has given her no trouble since the removal of the sutures yesterday. I ordered twelve grains chlorate of potash, dissolved in four ounces of water, to be used as a wash for the eyes every four hours. After this I heard nothing from her until the 20th, when she returned to have the other eye "fixed." The left eye now looks to be perfect—no scar or other mark to indicate that it has ever been operated on; vision $=\frac{20}{\text{xx}}$. The right eye is in almost precisely the same condition as the left was before the operation, except that the corneal ulcers have nearly disappeared with the use of the eye-wash, which has been continued regularly up to this time. The right eye being operated on precisely as the left, the suture being allowed to remain two days, she was dismissed, on the 29th of May, entirely cured. I saw her on the 24th of July in the enjoyment of good vision, perfectly free from any sort of discomfort about the eyes.

This is an excellent illustration of the third class of cases, and, so far as the surgical treatment goes, serves to show how speedily almost all such cases may be relieved. The corneal ulceration is of course a sequel of the entropium, and to prevent its return tinct. muriat. of iron was used internally to correct the dyscrasia. This, with the removal of the local or exciting cause, makes the cure quite complete.

That class of cases belonging to the first group, arising from spasm of the orbicular muscle, requires to be treated by the operation known as canthoplasty, which has already been described in Case I. The details of individual cases of this class would therefore be a work of supererogation.

I have selected cases typical of the classes to which they belong, so that whatever modifications may be required by individual peculiarities in the operative procedures may readily be inferred, since the principles upon which the operations are based have already been detailed. The classification of cases and the operations for their relief are suggested by a considerable experience; and I feel sure that a strict adherence to the rules that have governed my practice can not fail to demonstrate the utter futility of depilation and subcutaneous sutures, as well as the barbarous practice of excision of the whole ciliary margin of the lid. The operations above detailed, when properly performed, never leave scars or other disfigurements.

LOUISVILLE.

HÆMATOMA OF THE DURA MATER—AUTOPSY.

BY J. N. M'CORMICK, M. D.,
Late Resident Physician to the Cincinnati Hospital.

William Bethel, a farmer, of temperate habit, aged fifty-four years, came to me the 1st of June to be treated for what he considered "a sun-pain." Eight months before he had a fall from his horse, struck his head against some stones, was insensible for a few moments, and had some general headache for three weeks thereafter. Three weeks before coming to me he began to have pain in the right frontal region, and noticed impaired muscular power and sensibility of left half of the body. The pain had increased in severity, and was constant; the hemiplegia had very gradually grown worse. He complained of loss of memory and diminished power of thought. Pulse 60, temperature 98°; pupil of the right eye normal, acting under the influence of changes of light; the left eye was sightless. The pain was constant and severe for the four succeeding days, and the left hemiplegia was almost complete. On the fifth day became completely comatose; pulse 54, temperature 99.5°; urine and fæces passed involuntarily; right pupil dilated, acting but slightly under changes of light. The coma continued without intermission until death, on the ninth day from the time the patient came under observation, and the thirtieth from the first observance of the hemiplegia.

The treatment consisted in the application of cups to the temples, and the administration of thirty grains of bromide of potassium every three hours, with chloral at night to quiet the restlessness.

Autopsy twelve hours after death. Rigor mortis well marked. The scalp contained less than the usual quantity of blood. Lying over the right latero-convex surface of the brain was a rusty-brown sac, seven inches long, two inches broad, and one inch thick, containing some fresh coagulated blood, some dirty, darkish clots, and a chocolate-colored fluid which was evidently older. The sac resembled in form a flattened cylinder, somewhat curved from before backward to correspond with the arch of the cranial vault. Its outer surface was adherent to the dura mater,* but its inner surface was entirely free from adhesions, and was smooth and moist. The principal connection with the dura mater was by means of blood-vessels and some imperfectly-organized lymph. The right hemisphere was depressed, the convolutions flattened, and the brain substance anæmic. There was some serum in the cavity of the arachnoid, and some lymph and pus on the surfaces of the membranes about the sac.

Such is a brief history of a case that is interesting because it is a well-marked example of a rare difficulty—hemorrhage upon a serous membrane—and because the symptoms, though as well defined as is usual in such cases, were such that only a probable diagnosis was to be made. Griesinger tells us that if there is a marked interval between the first severe circumscribed pain and the development of the graver brain symptoms, and if from the first the pain is localized and confined to the forehead or vertex, an opinion may be formed with more confidence; because inflammation of the other membranes has a great tendency to diffuse itself, and is accompanied therefore by general and not circumscribed headache. The same author attaches much importance to the contraction of the pupil on the affected side. In this case, however, the pain at the time and after the receipt of the injury was so slight, and attracted so little attention, that a correct history could only be obtained by the closest inquiry, and when the severe brain symptoms came on death was also at hand. In this case also the pupil on the affected side was dilated.

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* Kölliker states that the inner surface of the dura mater is covered with pavement epithelium only, and has no proper covering from the arachnoid.

The erroneous views formerly entertained in regard to the pathology of this disease, which were supported by so great an observer as Rokitansky, were dispelled by the light thrown upon it by the researches of Virchow. They are not simple hemorrhages at the edges of which the fibrin has become deposited and the fluid thus encysted, but are the remains—or, more properly speaking, the results—of a chronic inflammation of the dura mater. The pathological course of this case was probably about as follows: At the time of the fall a small hemorrhage occurred, which, acting as a foreign body, excited an inflammation in that portion of the membrane immediately around the clot; lymph was thrown out and became organized, and thus the fluid became encysted by the pseudo-membrane formed from the inflammatory lymph, and not from the blood fibrin. New large capillaries formed in this membrane, and from their imperfectly-formed walls fresh blood was more or less constantly extravasated. The sac would enlarge, partly by dilatation, partly by development, as in the case of ovarian cysts; and was well borne, because it was located over a part of the brain where the pressure would be most readily transmitted to the opposite hemisphere, through the special arrangement in the anterior portion of the skull, until a more copious hemorrhage occurred, which with the lymph and pus produced a compression of the brain incompatible with life.

NEW HAVEN, KY.

Reviews.

A Treatise on the Theory and Practice of Obstetrics. By Wm. H. Byford, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in the Chicago Medical College, etc. Second edition, thoroughly revised. New York: Wm. Wood & Co. 1873.

Less than three years ago the first edition of this work was issued. That, most unfortunately, was marred by many errors of manner rather than of matter—errors resulting chiefly from careless and hurried writing and from negligent proof-reading. While these have not all disappeared—while we still find Boudeloeque and Tanier for Bandelocque and Tarnier, ovarian tube for fallopian tube, page 48, etc.—yet the improvement has been most marked, and Dr. Byford is to be congratulated upon having produced an excellent manual of obstetrics, which must prove most acceptable to students and to physicians. We must be permitted, however, to give a brief extract, accompanied with a protest against such an extravagant, hyperbolical style in a work designed as a text-book. Dr. B. thus speaks of the development of the pregnant uterus: "Muscular fibers that are microscopic and imperfect in formation, and feeble in strength, become distinct, visible, and gigantic in proportions and strength. The nerves, before hardly demonstrable by any means, are deployed into massive plexuses; while the arteries and veins, which were mere threads in dimensions, become great channels for the conveyance of floods of fluids." If this be a just and accurate statement of the case, it is simply astonishing that any woman can contain and retain for a moment in her abdominal cavity an organ with gigantic muscular fibers, massive plexuses of nerves, and great channels swept by floods of fluids! T. P.

The Cerebral Convolutions of Man. By ALEXANDER ECKER, Professor of Anatomy and Comparative Anatomy in the University of Freiburg, Baden. New York: Appleton & Co. 1873.

This little work, which is amply illustrated by maps, professes to be founded on the original observations of the author, who has examined the brain of the fetus and of monkeys in instances enough to enable him, as he believes, to recognize a constant unity of form in the convolutions of that organ. Since the failure of his illustrious countryman, Gall, to present a satisfactory organology of the cerebral surface attempts in that direction have been seldom made, and the convolutions have been regarded as a bundle without system. If, on the contrary, it can be shown that they have a regular arrangement, the first step will have been taken toward a true science of craniology; and this is what Prof. Ecker proposes to establish in the little work before us, which is given to the reader in an English dress by Dr. Robert T. Edes. The problem which he seeks to solve is one of the most interesting in the whole range of physiology. The brain is the organ of thought; but what portions of it are engaged in special operations of the mind is a question which can only be answered by a long series of observations, and must await the anatomy and physiology of a future age. The type of the convolutions in the human brain, it appears, is only a higher development of that of monkeys. So that in the brains of these creatures, and especially in the brain of the fetus, we have the structures most favorable for ascertaining the furrows which separate the cerebral convolutions. We have no doubt that there is here much deep philosophy to be worked out by physiologists.

Treatise on the Pneumatic Aspiration of Morbid Fluids: A Medico-chirurgical Method of Diagnosis and Treatment of Cysts and Abscesses of the Liver, Strangulated Hernia, Retention of Urine, Pericarditis, Pleurisy, Hydrarthrosis, etc. By Dr. GEORGES DIEULAFOY, Gold Medalist of the Hospital of Paris. Philadelphia: J. B. Lippincott & Co. 1873.

A delicate capillary needle united to an air-pump by means of a tube with a stop-cock constitutes an aspirator. The merit of Dr. Dieulafoy's discovery lies in the *previous vacuum* secured by his instrument. He has written a book of nearly four hundred pages to set forth the merits of aspiration as a diagnostic and therapeutic means. Wood-cuts of the instrument and notices of its operations have already appeared in these pages. No doubt most of our readers have satisfied themselves as to the value of the aspirator as an aid to diagnosis. As a means of treatment, our individual observation does not lead us to estimate it quite so highly as M. Dieulafoy evidently does. Nor, in our opinion, is its harmlessness altogether assured, though Dr. Dieulafoy has thrust the "needles into almost every part of the body—into the joints, the liver, the spleen, the bladder, the intestines, the lungs, the meninges"—without ever having seen any consecutive accidents. He affirms, indeed, that "*it is always possible, owing to aspiration, to search for a fluid collection without any danger, whatever may be its seat or nature.*"

Our author is enthusiastic as to the capabilities and future developments of aspiration. "Why," he says, "should the needle not be insinuated into pulmonary cavities of phthisical patients, to modify, by means of aspiration and injections, the walls of the cavity and the adjoining tissue? Why should we not perform direct blood-letting of the lungs and heart in desperate cases of congestion?" He anticipates that it will come into use as a means for injecting and washing out the bladder and stomach. Retention of urine, so long a surgical bugbear, is in presence of the aspirator nothing more than "an insignificant phenomenon," while hydatid cysts of the liver and pleura, pericardial effusions, hydrarthrosis, abscesses of almost all sizes and in almost every locality, spina-bifida, and hernia are, according to our author, treated by aspiration "without danger, without difficulty," and successfully.

We know of a case in this city where a hernial sac was "aspirated," and the gut successfully returned; yet all surgeons are aware that when the strangulation has been extreme, and the bowel long down, to return it is the worst possible practice. So that, so far as we are concerned, we shall continue, until we have further light on the subject, to adhere to the old operation, and reserve aspiration for exceptional cases. We feel very much in the same way toward aspiration in empyema, for we are not of those who believe that the entrance of air into the pleural cavity is so much to be dreaded. On the contrary, one of the most enormous collections of pus we remember ever to have seen in the pleural sac was relieved, after ordinary punctures, many times repeated, had failed, by trephining a rib, and thus keeping the opening patent. The work of M. Dieulafoy will, however, well repay perusal. It abounds in illustrative cases, and brings the subject of pneumatic aspiration down to the latest moment.

Clinic of the Month.

MIND, BRAIN, AND SPINAL CORD.—We make room in the present number for yet other extracts from the lectures of Dr. C. B. Radcliffe on "The Mind, Brain, and Spinal Cord in certain morbid conditions." They will repay perusal.

"*Symptoms of Cerebral Exhaustion.*—These *may* be, in the first group, failure of memory and of mental energy generally, sleepiness or the reverse, depression of spirits, unusual irritability of temper; in the second group, craving for frequent supplies of food and stimulating drinks, for the latter especially; lessened locomotive power, lessened control over the bladder, lessened sexual activity, unequal distribution of blood, an aged appearance; in the third group, malaise in the back of the head and neck, vertigo, undue disposition to tears, immoderate yawning, bouts of breathlessness and faintness; in the fourth group, epileptiform symptoms, transitory hemiplegia, transitory delirious wanderings, transitory coma.

"Of course all these symptoms are never present in the same case. Of course there is very great apparent dissimilarity in many cases from the endless differences in the way in which particular symptoms are present or absent, and in which the symptoms actually present are associated. Still for the most part there can be no insuperable difficulty in the matter of diagnosis. There is, however, always the possibility that the symptoms may mean more than mere cerebral exhaustion. In other words, the same symptoms may be associated with a state of brain which may pass off quickly, or which may not so pass off. If they pass off quickly—so quickly as to make it certain that they could not have depended upon any organic change in the brain, like apoplexy, or inflammation or degeneration in one form or another—then they may indicate nothing more than cerebral exhaustion. If they do not pass off, then they may indicate a graver state of disease than cerebral exhaustion. That is all that can be said upon the subject, except this—that a state beginning in cerebral exhaustion may end in a graver form of brain disease. What this state of exhaustion may be I do not pretend to say. I can find no better name for it; and certainly I can not substitute for it any name implying a dependence on vascular congestion or fullness of any sort; for there is no *good* reason for thinking that any one symptom of the disorder points to a state of cerebral congestion, or to an excited, over-active condition of the circulation.

"There is so much more to be said that it is difficult to choose what to say and what to leave unsaid. Indeed all that I can trust myself to do is to say a few words upon one or two practical questions bearing upon the prevention and treatment of cerebral exhaustion, the question of food, the question of walking exercise *versus* rest, the question of head-work or the contrary, and the question of the proper position of the head when lying down."

We omit Dr. R.'s remarks on food and exercise, but copy the remainder on position of the head for sleep, and head-work or the contrary.

"*Position of the Head for Sleep.*—Much might easily be said upon the importance of attending to the position of the head where the object was to conciliate sleep, or the contrary, and in many other cases. The recumbent position has obviously very much to do with sleep. A person sleeps on lying down, and for the most part as long as he continues to lie down. Undoubtedly sleep may happen in the sitting posture, and even while standing; but these cases are exceptional, and the broad rule remains that sleep has to do with the recumbent and wakefulness with the sitting and erect positions. It is certain also that sleep in bed is, as a rule, sounder with a low pillow than with a high pillow. If then there be a state of wakefulness at night, the head should be kept low; if, on the contrary, undue sleepiness be the state of things then met with, the head should be kept high. Nay, it would even seem to follow that the degree of sleep and the amount of it may be regulated by simply taking care that the head is in the right position. The facts would seem to be too obvious to require notice, and yet they certainly have not been realized and applied in practice to the extent which might be expected. It might be expected, for example, that hospital beds would be so constructed as to allow, with a view to the conciliation or counteraction of sleep, of the head being easily depressed or raised. It might be expected that the same want would have been met in one way or other in the construction of ordinary beds; but this expectation as yet is not warranted by the facts. Indeed certain complicated couches, like those of Alderman or Ward, are the only effectual means of meeting the case in question; and these have really been contrived, *not* for the purpose of meeting this case, but simply for the purpose of putting the patient in that particular position in which he would be most comfortable. It is, however, not for this latter purpose, but for that of conciliating or counteracting sleep, that I am continually making use of these couches and similar contrivances of a less costly description. In a case of cerebral exhaustion, or in any other head-affection where prolonged recumbency is a necessary part of the treatment, I scarcely know how to dispense with one of these couches or one of these contrivances. On an ordinary bed such a patient is very apt to sleep too much in the day and too little at night—too little at night because he has been sleeping too much in the day; and before long there is no small danger that for this reason night-draughts of various sorts have been introduced into the treatment. On the couch, on the contrary, or on the contrivance which takes its place, all these difficulties are for the most part fully met. By raising the head in the day-time the patient remains awake sufficiently to be able to sleep at night; by depressing the head at bed-time the conditions are rendered more favorable for sleep during the night; *and, as a rule, sleep is to be conciliated in this way—an incalculable advantage—without the help of narcotics.* At all events, the facts fully justify these statements. It is possible to fight successfully against either undue drowsiness or undue sleeplessness in this way. In particular, it is possible to fight against undue sleeplessness in this way, and that too without the equivocal help of narcotics.

"*Head-work or the contrary.*—I am disposed to think that rest from head-work may be too much insisted upon in cerebral exhaustion and in other cases of the kind. Often and often I have met with patients with jaded brains who have certainly let their minds lie fallow too long. More than one overworked barrister, who could scarcely drag on until the long vacation, has complained to me that the vacation was too long, and that it would have been better for him if he had returned to his own work sooner, or if he had changed his work. Mere distraction, even travel, is not enough. Weeds will grow apace under such circumstances, and soon, very soon, the difficulty is to get the mind under cultivation again. What is wanted generally, even at the beginning, is not that work should be given up altogether even for a short time, but that it should be moderated in amount or changed. It is given to few to imitate the example of the present Premier, who, when thoroughly overwrought at the end of the session, recruited himself by spending a great part of his holiday in writing 'Juventus Mundi;' but the fact is full of significance in the present place. Indeed the longer I live the more am I convinced that it is a grave mistake to let the mind lie fallow even for a short time, not only in the particular case under consideration, but in all cases where head-symptoms have to be dealt with; in epilepsy, for example, no less than in cerebral exhaustion. In epilepsy, indeed, I have long maintained that it is the very gravest blunder in practice to suspend education—that the very basis of successful treatment is only to be laid in education. In the case of an epileptic child I should be altogether hopeless of arriving at a satisfactory result except by building the plan of treatment on this foundation; and the same feeling would influence me considerably even in the case of an adult suffering from cerebral disorder, let this disorder be what it may, if in one way or another I could not keep his mind from preying upon itself by providing him with some proper occupation. Of course this notion may be carried too far. Undoubtedly harm, much harm, may be done by pressing the necessity for work too strongly, but practically this danger will prove to be small in comparison with that of letting the mind lie fallow."

SORE NIPPLES.—Dr. Fordyce Barker, in an instructive lecture on this subject, says:

"The forms of sore nipples are, first, inflammation. This generally occurs in those cases where the nipple is naturally contracted, or in those cases, which are not at all infrequent, where the nipple is almost completely absent. The child when placed at the breast has great difficulty in getting hold of the nipple, especially when the breast is distended, which renders the nipple still more retracted; it pulls away at it, and as a result of the irritation to the breast an inflammation of the nipple takes place. This inflammation of the nipple may by propagation pass into the lacteal ducts, and we may have mammary abscess as a consequence of that. Second, fissure or erosion of the nipple. These fissures of the nipple are of two forms. One comes from inflammation of the nipple; but there is another form which exists just at the base of the nipple, and gives the most intense pain and suffering, the patient perhaps bursting out into a profuse perspiration as the child is placed at the breast. The next form of sore nipple is where the surface of the nipple is red and denuded of its cuticle. The nipple is very much retracted, and in this case there is a fissure at the top. The pain is very intense, and it may be that the woman experiences as much suffering from this as from any thing else during the entire puerperal period. The process does not generally confine itself to the nipple alone, but the areolar tissue around the nipple becomes inflamed, and as the inflammation becomes more intense perhaps one half or two thirds of the nipple becomes entirely destroyed in the process. These three forms are distinctly and readily recognized; and now a few words with regard to the treatment of them.

"In the first place, for drawing the nipple out, there is a great difference among authors as regards the propriety of applying the child to the breast immediately after the confinement has been completed, and also as to the proper time when it should be done. Some writers recommend that it should be done as soon as possible after delivery. The reason given for this early application of the child to the breast is that the child by nursing stimulates the breasts, which excites reflex action in the uterus, thereby producing uterine contraction, which renders the woman less liable to post-partum hemorrhage.

"With reference to that point, I can say I do not consider it to be sound practice. I adopted it for some years, but have given it up entirely. You can procure uterine contraction, which will place the woman out of all danger from post-partum hemorrhage, by means which are far less exhausting for the patient than the resort to the troublesome efforts of the child at nursing. I now advise to get the woman completely restored after the fatigue of confinement before applying the child to the nipple. The first stage after parturition is that of exhaustion. The whole effort of the system has been used to accomplish this result, and so complete is the exhaustion that it is very commonly manifested by nervous chills. If the woman is permitted to get a few hours of sleep, her exhausted nerve-power will be restored, and *then* is the time to direct that the child should be placed to the breast. The main reason for this is that the breast is not now distended, and the nipple is easier drawn out. The traction excites the more rapid secretion from the breast, and the first secretions from the breast are of great benefit to the child as a laxative, being its first proper food. It is then that the nipple can be more readily grasped by the child, and properly formed. If, however, you wait until the secretion of milk has taken place, and the breast has become distended, before applying the child, the distension itself causes obstruction to a free flow through the ducts, and the nipple and breasts may become a very great source of irritation.

"There are some cases in which the nipple congenitally is so short that the child can not get hold, and it must be drawn out by some mechanical appliance. The most common method resorted to for accomplishing this is the old-fashioned application of a bottle, which has been filled with hot water and emptied, and the use of the breast-pump.

"A few words with regard to breast-pumps. Most of them are constructed upon principles utterly devoid of common-sense. Most of them have so small an opening in the part applied to the breast that the nipple is constricted, and the milk can not flow at all after the first two or three exhaustions of the instrument. The essential requisite for an efficient breast-pump is a large bell-shaped extremity, so that the nipple is not at all constricted by the narrow diameter which is applied over it. The pump which meets the indications most satisfactorily, and which has come to my notice, is what is called Mattson's breast-pump, and it is a most excellent instrument.

"With regard to treatment of sore nipples, the following are the rules which chiefly govern me in the management of these cases. If the nipple is inflamed, apply a poultice until the inflammation is subdued, and then apply a solution of nitrate of lead in glycerine, ten grains to the ounce. This is also the most complete and perfect prophylactic against the occurrence of sore nipple that I know of. This solution should be applied immediately after nursing, having first washed the nipple perfectly clean. The application must also be washed off every time before the child nurses. It is almost a specific, when properly used, against excoriations and ulcerations. If the tendency is quite strong to sore nipples, the solution may be used of the strength of fifteen grains to the ounce, or even one scruple; but as a rule the ten-grain solution is sufficient. Next, where the cuticle is denuded and we have a raw surface, or it becomes so irritated that there is a tendency to an abrasion, the indication is to form an artificial cuticle, which will entirely protect the parts and yet permit the milk to pass through it. For this purpose collodion has been extensively used. The objection to collodion is this, that it contracts as it dries, and thus itself becomes a source of superficial irritation and discomfort, and does not readily permit the flow of the milk. I have used for this purpose, and with the most satisfactory results, the compound tincture of benzoin. Wipe the nipple dry after the child has nursed, and with a camel's-hair brush apply four or five coats of this tincture. The first application may produce some burning, but when once applied this will be overlooked, and the woman will desire its re-application. This forms a most excellent artificial cuticle, and at the same time permits the flow of milk without obstruction. Cicatrization will take place under this coating, and the patient will thank you for the benefit received. When the fissure is at the base of the nipple—very small it may be, but accompanied by the most severe and agonizing pain—the most satisfactory method of management is to touch the fissure with a fine point of nitrate of silver, and apply over this the compound tincture of benzoin as before.

"When the inflammation and ulceration have gone to such an extent as to destroy the surface of the nipple, and there is danger of the inflammation extending back to the mammary gland, do not allow your patient to torture herself by allowing the child to nurse. Remove the child entirely, and empty the breasts by the breast-pump or by rubbing. I then use as an application in these cases the following:

℞. Rose ointment, ... ℥j;
Carbonate magnesia, . . . ℈j;
Calomel, ... gr. xxx. M.

These ingredients should be rubbed together very carefully, and it should be freshly prepared, perhaps every twenty-four or thirty-six hours. If the child is permitted to nurse at all, it should be done entirely through an artificial shield, and the best shield is one made of the cow's teat. The objection to the india-rubber shield is that there is an offensive odor emitted from them, and they are very apt to make the child's mouth sore. If, however, it becomes necessary to use the shields which are in the market, in selecting them get a broad base, what is called the L-shaped glass, in the same manner as in the selection of the breast-pump. The ordinary nipple-shields seen in the stores are simply abominable."

MIGRAINE FROM INJURY TO THE HEAD.—Douglas Morton, M. D., one of our hospital colleagues and contributors, has recently communicated to the London Practitioner his individual experience of migraine, which we condense as follows:

In his judgment, the facts that he offers very distinctly support the theory of a neurotic origin. The symptoms attending his attacks, in order and character, have been just the same; and each attack, as far as he has been able to learn, may properly be regarded as a *typical* expression of the affection. The point to which he especially calls attention is that *his first attack was directly and immediately induced by an injury.*

Fourteen years back he had a severe fall from a swing in a gymnasium, his head striking the ground with great violence. At the moment he felt no pain, but was *stunned.* After a short time, his symptoms having improved a little, he took up a book, but to his dismay found that he could see only the left half of the open book; and if he directed his attention exclusively to a line or a word, only the left half of that. His first impression was that his right eye had been injured; and when he looked in a mirror to find out if such were the case he was startled at not being able to see any part of the right side of his face. He held his hand over one and then the other of his eyes, and discovered, as he supposed at the moment, that the injury to his eyes consisted in the destruction of vision in the right halves of both; for with either closed he could see the left halves of objects he looked at with the other. He returned to his book and tried to translate, but found this impossible; the meanings of the words had escaped his memory almost entirely. He could scarcely pronounce a word, the difficulty seeming to be that he could not well retain a conception of the sound represented by more than one letter at once. Soon after and for the first time he began to suffer headache, at first not severe. He joined a group of friends, in whose conversation he ventured to participate. He found, however, that while he could intelligently follow their conversation he had not the power to select words suited to the expression of what he wished to say. He hit upon words in a most curiously random way—a verb perhaps for a noun, or an adverb for a preposition. His headache continued to increase in severity, and in another hour became almost intolerable. He then suffered nausea, and vomited, but the disturbance of vision had entirely passed away. He soon recovered from the sickness, though the headache lasted the remainder of the day—about eight hours.

Had he suffered no subsequent attack of migraine he would think the condition described as above due to "concussion of the brain;" but after an interval of about seven years he had his second attack, and on this occasion noticed phenomena that escaped his attention in the preceding one; viz., the appearance of a peculiar figure, trembling in space, seemingly a few feet from his eyes, and a sensation of numbness in his right cheek and the right side of his tongue, which came on with the headache (if his memory is correct) after the optical phenomena had disappeared.

Since that time he has had several other attacks, each being expressed by essentially the same set of symptoms. The form even of the phantasm which quivers before his eyes in the outset of every attack has continued almost exactly the same.

In reference to the etiology of his case he has in no instance been able to connect an attack with any deviation from what is his usual mode of life, whether as to diet, amount of work, mental or physical, amount of sleep, or exposure to weather. Nothing whatever in his experience has seemed to point to disturbance of digestion as a cause. He has suffered headache from the latter cause, and from most of the causes that usually occasion headaches in other people; but his *sick*-headache stands alone—*sui generis*—in its peculiar group of symptoms and in the obscurity of its etiology.

In his experiments in treatment he has been more fortunate; indeed his results have been positive and decidedly favorable. He has experienced benefit from a cup of strong tea at the occurrence of the first symptoms, so also from a tumbler of sherry wine; but *the* remedy *par excellence* he has found in guarana. He took four powders, of about thirty grains each, in two hours; and, though perfect relief was not afforded, his suffering was yet diminished to such a degree that the attack, whose prodromes forboded unusual severity, proved to be a very small affair indeed. Dr. M. allows that, having tried the guarana only once, it may appear unscientific to speak so enthusiastically of it as *the* remedy; but so intense had always been his suffering, and so great was the relief following the medicine, that he regards their connection as a *propter hoc* relation. He has seen one or two other cases reported in which great benefit was derived from guarana. Dr. M.'s main object was to give the circumstances attending his first attack, as, to his mind, they appear to throw light upon the true character of the affection.

New Method of healing Ulcers. — Dr. Nussbaum, in the *Wien. Med. Presse*, claims to have successfully treated upward of sixty cases of chronic, extensive, and otherwise intractable cases of leg-ulcers by the following simple procedure. The patient is at first narcotized, and then around the ulcer of the leg or foot, a finger's breadth from its margin, an incision extending down to the fasciæ is made. Numerous blood-vessels are divided, and a severe hemorrhage ensues, unless a fine pledget of lint be packed into the cut and the entire ulcer strongly compressed. The packing with lint is also necessary to prevent union of the cut edges by the following day. Upon the second day the bandage and lint are removed. From then until a cure is effected a simple water-dressing is applied. The author states that an astonishing change can be seen even in the first twenty-four hours. The ulcer which yesterday threw off quarts of thin, offensive, ichorous pus furnishes to-day not more than a table-spoonful of thick, non-offensive, healthy pus. The old ulcer becomes rapidly smaller, healing from the margin toward the center, and is healed in a short time; but the cut is changed into a broad circular sore, which also speedily cicatrizes. The great diminution of the secretion and other favorable changes occurring in the ulcer find an explanation from the fact that the circumcision has divided dozens of large, abnormally-widened blood-vessels. Time is thus given for the lessened nutritive material, which previously was carried off by the excessive secretion, to be transformed into cells and connective tissue; in other words, granulations are formed, which fill up and heal the deep ulcer. Without claiming this as a radical method, the author assures us that the cure is much more rapid, and the cicatrix becomes more elastic and resisting, than in the ordinary means applied, which usually require so much time that the patients depart with half-cured ulcers, soon to find themselves in their previous deplorable condition. (Phila. Med. Times.)

PROGNOSIS OF DELIRIUM TREMENS.—Dr. Magnau (*Mouvement Médical*, May 30th) remarks that it is important to diagnose what cases of delirium tremens are likely to prove fatal when the early appearance of the disease is so constantly similar. Delirium proves nothing, for it may be intense in a slight attack. What is most important is the temperature. The attack of delirium tremens may be febrile or apyrectic. In feverish cases we see the temperature rise rapidly to 39°, 40°, 41°, 42°, and even in some cases to 43°. If the termination is to be favorable, we notice toward the fourth or fifth day a sinking of the temperature, which gradually becomes normal. If, on the contrary, the termination is to be fatal, the temperature remains stationary, or rises to the last. In non-febrile cases the thermometer oscillates between 38° and 39°, and about the third day becomes normal. A second prognostic sign consists in motility. The trembling of the whole body is not the most important symptom. There are undulations of the muscles which continue during sleep, and are constantly observed when the hand is applied to the muscular surface of the patient's body. In such cases we may affirm that the prognosis is grave, the spinal cord is attacked, greatly hyperæmiated, and destroyed even in certain points by hemorrhage. A third sign consists in the feebleness of the lower extremities, a kind of paraplegia. M. Magnau insists that we must not confound febrile alcoholism with fever arising in a drunkard from a wound or inflammation.

TREATMENT OF GASTRALGIA.—Dr. Joulin *(France Médicale)* strongly advocates for the treatment of gastralgia: 1. A poultice of ice for ten minutes, morning and evening, to the pit of the stomach; 2. A mustard plaster to the same spot immediately on removing the ice poultice, to be kept on as long as possible; 3. Pounded ice, to be taken morning and evening, a table-spoonful every five minutes for one hour; 4. A mustard bath with two pounds of mustard three times a week. The ice of the poultice is to be chopped up in small bits and inclosed in an india-rubber bag. The ice taken internally must be pounded with sugar, or it may be prepared by an ice-man to the taste of the patient. It must be swallowed down suddenly, and not kept in the mouth, as it would lose its coldness. If a table-spoonful would be too much at a time, as we fancy it mostly would, several tea-spoonfuls may be taken instead. The mustard bath Dr. Joulin regards as a powerful tonic.

Notes and Queries.

Collodion and Silk Gauze as a Dressing in Mammary Abscess.—Dr. Douglas Morton, Physician to the Woman's Department of the Louisville City Hospital, has been using for some time back collodion and silk gauze as a compressive dressing in inflammations and abscess of the mammary glands with the most satisfactory results. He writes of it:

"Strips of 'Donna Maria' gauze (or a very fine silk barege, such as ladies now use for veils), cut of the requisite length and width and secured by collodion, constitute a dressing in cases of inflamed breasts so much superior to that of strapping with the ordinary plaster that I think it merits being more generally known. For some time past I have used no other dressing in breasts requiring support and compression. The manner in which it is applied is sufficiently well known. Among its many advantages may be mentioned that with a little care it can be applied over any well-fitting plaster; and when suitably fenestrated medicines in different forms may be made directly to the parts without affecting the integrity of the dressing."

Sex of Fetus in Utero indicated by the Heart's Pulsations.—It has been asserted of late that the sex of the child may be ascertained before birth by the number of the heart's pulsations. If a female, the pulsations, it is said, will not be less than one hundred and forty a minute. If they fall below one hundred and thirty-five, it may be asserted confidently that the child is of the male sex. Such is the statement, and it is affirmed that the exceptions to this rule are rare. Prof.

Palmer informs us that he has recently counted the heart's pulsations six times, at intervals of a week or two, to test the value of this mode of diagnosis. He ascertained the number to be pretty uniformly one hundred and forty-five, indicating the presence of a female child, but at birth it proved to be a boy weighing ten pounds.

An odd effect of Hypodermic Atropia.—In a note from Dr. George N. Monette, of New Orleans, he says he recently injected into the left arm of a young woman suffering from muscular rheumatism the third of a grain of morphia and the sixtieth part of a grain of sulphate of atropia. In a few moments after a scarlet rash appeared on and was limited to the right side of the body.

Oil of Male Fern in Tape-worm.—T. S. Galbraith, of Seymour, Ind., writes: "Mrs. W. had suffered for two years or more with tape-worm. During the time she had taken turpentine, pumpkin-seed, etc., with the effect of dislodging many joints of the parasite, but only to re-form at the expiration of six or eight weeks. After the usual fast, one drachm of the oil of male fern was given in half an ounce of syrup of acacia. The dose was repeated in an hour. At the end of another hour a brisk cathartic was administered, with the effect of bringing away twenty-two feet of the worm, but without the head. The patient was much relieved, and for three months improved in general health. At this time all the symptoms returned. Directed a fast of twenty-four hours; gave a full dose of castor-oil at bed-time. Next morning added half an ounce of the fern-oil to a little sweet milk and acacia syrup, and gave one third hourly, following this by a cathartic. An immense mass of worm was passed soon after, and though the head was not discernable it must have been present, since the patient has continued entirely well now for ten months."

CHLORAL HYDRATE IN ENURESIS.—Dr. Theodore West, of Marianna, Florida, sends the following: "Having seen mention made of cures of enuresis by hydrate of chloral, I have recently given it in a case where it not only failed to relieve but absolutely aggravated the trouble."

REGISTRATION.—Do the physicians of Kentucky want a registration law? If they do, it is easy to get it, and the method simple. Fill up the petitions I sent you in June last by the names designated; viz., the officials and ex-officials, the pulpit, the bench and bar, and the representative citizens of your counties. I appeal to each member of the Kentucky State Medical Society, I appeal to each practitioner in the state to do his duty. I want such an array of names that the General Assembly will feel constrained to pass the law at once, and pass it in the shape we indicate. Our failures in the past, and the resulting chagrin and mortification, are clearly chargeable to our own apathy and mismanagement. We hold success in our own hands; let us use the little industry necessary.

It has been no light task, in the absence of a directory, to obtain your names and post-office addresses; but by taking the names of the Kentucky State Medical Society, the subscribers of both medical journals at Louisville, interviewing my acquaintances in the legislature, and hunting through subscription-lists of newspapers, I collected between eight and nine hundred names outside of Louisville.

In response to the labor I have had to perform in making out this list, I have only to ask you to write the name of the county in which the petition is gotten up plainly at the top of the petition; and if the prominent names mentioned are already collected by another doctor, to fill yours with the names of any persons who are voters in your county. On presenting a petition for signatures it will be well to explain that the labor we are now doing, and that which we will be required to do under the proposed law, is not only entirely gratuitous on our part, but will tend directly to destroy our own incomes by lessening the amount of disease; that the facts collected under a registration law are indispensable in order to determine the salubrity or insalubrity of different parts of the state; that we are without statistics by which life-tables may be made up, on which to base the calculations of annuities, incomes, and guide us in life-insurance; and that the political economist looks upon the number of births and marriages as a sure index to the prosperity of any people; that without registration we have no security that property earned by us, perhaps by great sacrifices, will descend to those who are our legal descendants.

The necessity of registration, and the accumulation, study, and analysis of vital statistics, are demonstrated day by day as the results of these investigations explode the errors of the past. For example, thirty years ago it was taught that the common day-laborer was the longer-lived man; whereas it is now conclusively settled that light work, an assured income, and freedom from care promote longevity. At the time alluded to it was believed by many that life and success in life were a lottery in which the illiterate boor had equal chances to win a competence and a position with the learned and skilled. It is now clearly ascertained that the rich live longer than the poor, the wise longer than the ignorant, the cleanly longer than the uncleanly; and that the illiterate, unskilled boy has eleven times as many probabilities of spending his days in a prison as the one who has acquired an education and learned some useful trade or occupation. But we go forward in Kentucky in the old rut, and prove our light estimate of ourselves by numbering and valuing our horses, cattle, sheep, and hogs, while the birth, marriage, and death of man is considered of no moment. Mankind are inconsistent always and every where. We record with great care the title to a few acres of land; our stud and herd-books are read by thousands with intense interest; but what was the maiden name of our grandmother, and whether she had or we have any legal title to the name we bear is a matter of indifference. We act as if men were inferior to the brutes; and by failing to register the birth of the child, as we record the title to the land, pave the way for large areas of land and whole herds of cattle to descend to those who are not the true owners.

Without registration we are in ignorance, and will remain in ignorance of the salubrity or insalubrity of different parts of the state. Let us change all this. Let us determine by the statistics of registration where human life is most secure in the state, and how to prolong it; for the highest type of medicine is preventive medicine. Let us be stimulated in our exertions by the fact that the most intelligent people of the earth are those who cling to it with the greatest tenacity. "In France the system is deemed an individual and social benefit, and is neither evaded nor disliked. In Geneva, in the Rheinish provinces of Prussia, and in Belgium, where the regulations were introduced when those countries were subjugated to France, they are tenaciously clung to, though those countries have long since become independent, and might have returned to the forms they had previously observed; and in Belgium, though after the revolution of 1830 an attempt was made to restore the clerical registrars by the parochial clergy, it was prevented by the exertion of the nation, who would not consent to the change."

Let us not forget that though we are welcomed to life by the best friends of our father and mother, smiles lighting up all faces, and kind prophecies are volunteered respecting our future career; that though again, when we are married, our best friends assemble around the altar to wish us joy and God-speed; and that though at last our friends with true sympathy see us laid in the grave; and that though, if we have distinguished ourselves, there is a tradition of us for a few years or a few generations; still there is no accurate record kept of whom we were born, to whom we were married, of what or when we died, while the tradition as to the multitude soon becomes a myth.

S. A. Foss, M. D.,
Ch'n Com. on Registration.

Lacona, Jefferson County, Ky., Sept. 16, 1873.

Dr. Bumstead.—The many friends of this distinguished specialist will be gratified to learn that he has returned to his home in New York, after his long sojourn in Europe, completely restored to health. The readers of the American Practitioner will be glad to know that he will resume his place among the regular contributors to its pages.

Death of Prof. G. W. Bayless.—This melancholy event occurred on Tuesday, September 9th. The immediate cause was cerebral apoplexy. Dr. Richard O. Cowling, formerly adjunct to the chair adorned by Dr. Bayless, his pupil and intimate friend, has been selected by the faculty and trustees of the University to deliver an address on the life and services of our lamented colleague. We insert here an abstract of the local proceedings had on the announcement of Dr. B.'s sudden end, and reserve for another issue the sketch to be prepared by Prof. Cowling.

At a meeting of the physicians of Louisville, held on the morning of September 10th, Dr. Lewis Rogers was appointed chairman and Dr. Bowling secretary. Dr. L. P. Yandell, sr., announced the object of the meeting. He said:

"Mr. Chairman—We have met this morning to pay the last tribute of respect to the memory of a professional brother who has been cut down suddenly in the prime of intellectual life and in the midst of his usefulness. We have come here to testify to the virtues and great professional worth of Dr. George W. Bayless, who died two days ago of apoplexy.

"I have a most pleasant recollection of Dr. Bayless as he came to this city a young medical student thirty-six years ago. He was one of the first class who attended the lectures in the Medical Institute delivered in the upper rooms of the city work-house. He was decided in his choice to come to our infant school by the fact that Professor Cobb had joined it with his fine anatomical cabinet. I remember the zeal and earnestness with which he devoted himself to his studies, and the bright promise he gave of the eminence to which he has since attained in his profession. Having attended lectures the following winter at Philadelphia, he returned here in the spring, after receiving the degree of M. D., and commenced the practice of medicine. Very soon afterward he was elected Demonstrator of Anatomy in the Medical Institute, and in that laborious and responsible office acquitted himself of his duties so ably that he rose every year in the estimation of the faculty and the students. It was while he had charge of that department that the school had its most rapid growth; but, though its classes rose to more than four hundred, such was Dr. Bayless's energy and efficiency, his dissecting classes were always supplied with subjects. In 1848 he resigned the position of demonstrator, and in the autumn of 1849 accepted a chair in the Medical College of Ohio with his friend, Dr. Drake. The spring following he resigned his professorship and removed to Missouri, where for some years he devoted himself to agricultural pursuits. But the life of a farmer was not suited to his tastes, and a few years before the breaking out of the war he returned to his old home here, where ever since, connected first with the Kentucky School of Medicine and then with the University of Louisville, he has been laboriously pursuing his profession as a teacher and practitioner.

" Dr. Bayless was a learned and skillful physician and surgeon, and as a teacher occupied successively three chairs in the medical schools of Louisville. As an operator he was cool, dexterous, and intelligent; as a lecturer clear, instructive, and impressive. He added to the renown of our profession by his labors, and gave a grace to it by the purity and uprightness of his private life."

The following resolutions were then adopted:

" Resolved, that it is with deep sorrow we have heard of the death of Dr. George W. Bayless, who has fallen while at the zenith of his intellectual usefulness.

" Resolved, that we have found him a highly enlightened and honorable co-laborer in the field of our profession, courteous to his associates, earnest and careful in the investigation of disease, skillful in the application of remedies, and always kind and attentive to his patients.

"Resolved, that in him the profession has lost an honored and loved compeer, the community a valued member, and the sick a kind and skillful physician."

At the regular meeting of the College of Physicians and Surgeons, September 11th, Dr. Speed made the following remarks:

"It is only a few hours since we committed to the grave all that was mortal of our friend and fellow, Dr. George W. Bayless. The university in which he was long a teacher has done honor to his worth. The profession at large, of which he was an honored member, has to-day passed becoming resolutions. It is simply graceful that this college contribute its share in commemoration of his virtues. With this view I submit the following:

"It is a trite phrase that 'the dealings of Providence are inscrutable.' They are inscrutable. His ways are past finding out. We may not attempt to solve the insolvable. We can only bow before his majesty, be still, and know that he is God. This we also know and feel to-night—that a form and a voice with which this hall was once familiar has passed away, and rests to-night in our beautiful city of the dead. We know that the heart, the analogue of many into whose secret chambers he had so often looked, and whose mysteries he had so often exposed to others, has ceased its pulsings forever. We know that the chords whose tone and whose office our brother knew so well are broken and silent in the grave. We know that there is another vacant chair in this college as well as in the domestic circle. We know that we have lost a fellow worthy of a seat among us, and in memory of that worth be it

"Resolved, that we cherish the memory and emulate the virtues of George W. Bayless.

"Resolved, that we tender to his family in their grief the warm sympathy of those who knew him in his best phases."

The faculty of the University met in the college, when Dr. J. M. Bodine, Dean of the Faculty, announced the death of Prof. Bayless. A committee, consisting of Profs. Bell and D. W. Yandell, was appointed to draft and report suitable resolutions. The committee retired, and afterward reported the following resolutions, which were unanimously adopted:

"Mr. Dean—This is the third time that the Medical Department of the University of Louisville has been called to face a calamitous visitation in the surgical teaching of the institution. On the 18th of March, 1864, Prof. J. B. Flint, apparently in the possession of his usual health, was struck down with fatal apoplexy immediately after returning from a visit to a sick neighbor, and now, eleven years after that event, we are called upon to deplore a similar affliction in the senior member of this faculty. Prof. B. R. Palmer, the successor of Prof. Flint to the chair of the Principles and Practice of Surgery, renowned as one of the most eloquent teachers in this country, occupied the chair six years, when he was suddenly, on the 3d of July, 1865, seized with a fatal affection of the brain, and he died on the day after his attack, the occupant of the chair.

"These three surgical teachers were eminent as general scholars. Though devoting themselves to specialties, each of them was profoundly learned in all departments of the profession. In their high medical culture they set an example that should excite emulation among their confreres. In that beautiful introductory lecture delivered by Prof. Bayless before the Medical Department of the University of Louisville, October 1, 1866, entitled 'Reminiscences of the Medical College,' Prof. Bayless paid this beautiful tribute to Prof. J. B. Flint:

"'Dr. Flint was not only a most accomplished academical scholar, but a thorough and sound medical scholar; and was in practice, what was his highest boast, a conservative surgeon. This was his great distinguishing trait as a surgeon, and that upon which he most prided himself. As an operator, he was one of the neatest, most dexterous, and skillful I have ever seen. He was perfectly composed and self-possessed when engaged in an operation. All in all, Dr. Flint justly ranked high in his profession—was a man of many sterling virtues and excellent qualities; and the circumstances of his funeral, so fresh in the minds of many present, attested the hold he had upon the respect and affections of the numerous personal and professional friends he had made in the West.'

"Prof. Bayless, like the illustrious Prof. Flint, was an eminent scholar, not only in what may be called his special domain of medical science, but in many other fields of cultivated intellect. He entered the Medical Institute of Louisville, as the first medical school here was called, in the first session of the school, in 1837, and speedily won the distinction of being one of the most industrious and progressive students of the class. As he commenced his medical life, he continued to the close of his career a most laborious cultivator of the science of medicine. He won enviable distinction in the three important chairs of a medical school—physiology, anatomy, and the principles and practice of surgery. He was a thorough master in all of them. As an operative surgeon, the eulogium which he bestowed upon Prof. J. B. Flint may be fully applied to him.

"Mr. Dean—I think that no one of us can soon forget the last evening we spent with Prof. Bayless, when he was to start early the next morning to Rockcastle Springs. He was full of buoyant expectation, as we all were, that in his case, as in Prof. Tyndall's, in his Alpine experience, the mountain air, with the exercise that he could enjoy in that bracing atmosphere, would renew his lease on life, and fit him for that activity of career to which he was devoted. All our information from that region down to yesterday justified our hope; those friends who were with him but a few days ago expressed to us their confidence in his restoration to health; but the telegraphic message of Tuesday night dispelled all these illusions of hope and shrouded our hearts in the depths of sorrow.

"In view of the long and intimate relations we enjoyed with our late eminent associate, we move the adoption of the following resolutions:

"1. That we have learned with the profoundest grief of the death of our colleague, the late Prof. George W. Bayless, Professor of the Principles and Practice of Surgery in the Medical Department of the University of Louisville.

"2. That we bear willing testimony to Prof. Bayless's rare and eminent abilities as a physician, his great judgment and skill as a surgeon, and unsurpassed merits as a teacher of surgery.

"3. That while we recognize in their fullness the high professional acquirements of our late colleague, we should do great injustice to our sense of what is due to him were we to fail to bear testimony to his eminent qualities as a member of society. He had few peers in his sense of the demands of untarnished integrity and of an honor untainted. In all the relations growing out of his duties as a man he was an exemplar of the highest virtue. In his domestic circle he was a model.

"4. That Dr. R. O. Cowling be appointed to deliver, at the opening exercises of the thirty-seventh session of the University of Louisville, on the evening of the first Monday in October, an address commemorative of the life and services of Prof. Bayless.

"5. That these resolutions be spread upon the minutes of the faculty, and a copy sent to the family of our deceased colleague.

At a meeting of the medical class of the University, held in the college-building, for the purpose of taking appropriate action with reference to the death of Prof. Bayless, a committee, consisting of Messrs. C. C. Godshaw, Ky., J. E. Goldin, Miss., I. L. Splawn, La., A. P. Bosey, Mo., and L. Johnson, Ga., was chosen to draft suitable resolutions. The committee made report as follows:

"Whereas, we have learned with profound regret and sorrow of the sudden death of our esteemed teacher, Prof. Bayless, which occurred on the 9th inst., therefore be it

"Resolved, that by his death the University Faculty have lost a valuable and faithful colleague, and the students a warm friend and most efficient teacher.

"Resolved, that we cherish the recollection of the sound moral precepts which it was his wont to impress upon his pupils; and that we strive in our daily life to imitate his many and crowning virtues."

A meeting of the trustees of the University of Louisville, on learning of the sudden death of Prof. G. W. Bayless, was held at their office. On motion, a committee consisting of Z. M. Sherley, R. J. Elliott, and D. Spalding, jr., were appointed to draft suitable resolutions. The following were presented and adopted:

"1. That we have heard with the deepest sorrow of the death of Professor G. W. Bayless, late Professor of the Principles and Practice of Surgery in the Medical Department of the University of Louisville.

"2. That in all our intercourse with Professor Bayless in the affairs of the University of Louisville we have ever found him true and faithful to the interests confided to him, and eminently fitted for the duties we appointed him to discharge.

"3. That in the loss of this eminent surgeon the community, in common with ourselves, have experienced a profound bereavement.

"4. That we tender to the faculty of the University our deep-felt sympathies in the loss they have undergone in the death of their colleague.

"5. That our condolements are respectfully tendered to the afflicted family of Prof. Bayless in the irreparable calamity they have sustained.

"6. That Dr. R. O. Cowling, as the cherished pupil, the intimate friend of Prof. Bayless, and adjunct professor of surgery, be requested to deliver on the evening of the first Monday in October, 1873, in connection with the other exercises of the evening, an address on the professional character and services of Professor Bayless."

CHOLERA AS IT PREVAILED AT LANCASTER.—The article on this subject to be found on another page can not fail to strike all who read it as a very remarkable production. It is seldom a paper on cholera contains so many carefully-observed and well-recorded facts. They must afford food for much reflection. The authors went from this city, at the request of the senior editor of the American Practitioner, in answer to a telegram from Dr. Eli McClellan, Assistant Surgeon U. S. A., asking medical aid for the distressed people of Lancaster. They remained throughout the epidemic, and by their courage and skill won the gratitude of an entire community.

THE AMERICAN PRACTITIONER.

NOVEMBER, 1873.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

THE ANIMATING FORCE.*

BY J. W. HOLLAND, A. M., M. D.,

Professor of Medical Chemistry and Toxicology in the University of Louisville.

GENTLEMEN OF THE MEDICAL CLASS:

You are welcome to the halls of the University. The generous provisions of the city for the cultivation of medical science are put at our disposal, and we invite you to make the most of them. A hearty recognition of old relationships is extended to our former students who are present, and to the new-comer the sincere assurance that his teachers will be his warm friends, who would make that venerable institution a real home to him. From many parts of our broad country you have come together for a single purpose. From many fields of labor your attention has been directed to the thoughtful consideration of the phenomena of life and disease. How do animate things have their being? What means this decay with which nature marks her progress?

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*An Introductory Lecture, delivered October 6, 1873.

Helplessly you may have gazed upon faces distorted by pain. Despite your protesting love, despite the ministrations of our art, you have seen dear ones sink into the tomb. Men like our late colleague, the lamented Bayless, with bodies apparently fitted for long and happy lives, and brains teeming with the ripe results of a life-time of study, by death are smitten, and they fade away. With reverential regards you would now look on the mysterious face which Isis vails from the profane eye. You now aspire to arm yourselves with all sanative power that you may restore harmony to discordant functions, that you may stand on guard at the gate that lets out your fellow-man from the "golden circuits of the day."

A course of medical lectures is highly satisfying to him who is warmed to it by the ardor of benevolence, while no pursuit is more fascinating to him who is urged by the keen spur of the spirit of inquiry. To him who endures the task solely that he may afterward get money it will always be naught but dry bones. Besides an abiding enthusiasm for the practical work of medicine, I would have you bring to the studies of this session a faculty of ideality, which will afford insight into things below the surface. Then a bone, a crystal, a cell will awaken thoughts of the great primal agencies with which it is endowed, as young and potent now as when out of a nebulous haze they molded a world. Whether you will be much the wiser by our lectures or not depends chiefly upon your intellectual frame and habits of application. I would have your labors energized by a far-reaching thought, such as inspired Bossuet when he left the brilliant court of Louis XIV. for the anatomical theater of Duverney. This inaugural occasion could well be employed by putting you in possession of a lofty idea to act as an ever-present incentive for the attention.

In selecting a theme I have also had in view the varied nature of my audience. There are learned men of science, students of various grades, and our friends of the laity who have honored us by their presence. The chronicler of this decade will note as prominent among its progressive features the disposition of the non-professional public to study general science. "Properties of matter," "conservation of force," are expressions familiar to the minds of the reading-class of every vocation. While then my discourse must be mainly scientific—that is, must deal with what is the highest development of common knowledge—I indulge myself in the hope that it shall not be unsuited to any considerable portion of my hearers. A saying of Aristotle suggests a subject competent to furnish instruction and promising rational entertainment to the non-medical as well.

Said he: "If the knowledge of things becoming and honorable be deservedly held in high estimation, and if there be any species of knowledge more exquisite than another, either upon account of its accuracy or of the objects to which it relates being more excellent or wonderful, we should not hesitate to pronounce the history of the animating principle as justly entitled to hold the first rank." By the term "animating principle" was meant the vegetative and sentient part possessed by plants and animals, and not the spiritual part, which brings man into religious relations with the Supreme Being. We delight to watch the gray expanse of years rolling away like a fog as we listen to him that speaks from the midst of the glory that was Greece. Many things were conjectured by the subtile philosophy of that time that we of this day have arrived at only by tedious processes of induction. Who does not take pleasure in the reflection that when science was at its dawn Epicurus defended an atomic theory, and Pythagoras ascribed the origin of life to heat. Over this rising day the clouds of the dark ages soon lowered, and the thinkers of centuries went groping about as if in unillumined night. For more than a thousand years no systematic researches were made in this direction, unless the delusive quest for the elixir which should prolong human life interminably can be so called. Yet was their labor not all in vain, for it discovered a mass of facts which else might have remained forever unknown. Ground so turned up and broken by the fruitless search for hidden treasure brought forth a more abundant harvest than a soil untilled. In surveying its results—chemical, physical, and medical—we should be grateful for the insane passion of alchemy as the thoughtful Christian gives thanks for the false religions that left hieroglyphs of history. It was not till about the latter part of the eighteenth century that science was able to free itself from the trammels of alchemy and cease to follow the vagaries of closet dreamers. Hotly contested controversies were decided by arbitration of instruments of precision, and physics and chemistry took a new start at a wonderfully accelerated pace. By subjecting her actions to test with the scalpel and microscope of the physiologist, the balance of the chemist, and the vernier of the physicist, nature's secrets are now so well understood by her wisest sons that almost have they plucked out the heart of her mystery.

The conceptions of the animating principle entertained by the fathers of science, as well as the later and more elaborate ones of Newton and Leibnitz, were projected far outside the facts then ascertained, and could not have to them the significance which nearly the same ideas have for us. The seed sown long ago fell on stony ground, and not until our century did it take root in the soil made fertile by enlightened cultivation. Science has been remodeled by accurate experiments in diverse directions until now all the facts brought to light are included in a formula springing from them, and so completely in harmony with them as almost to take the rank of a fact itself. A division of this formula is embodied in the doctrine known as "unity of force;" one that for years past has occupied the minds of scientists and physiologists every where, and which is now regarded as the best established conquest of contemporary science. This is the thought which shall refresh you when tired of details, for a scientific course can retain clearness and continuity best when its multitudinous facts are connected by abstractions upon the concealed causes and the laws by which they act. You should endeavor to possess yourselves of this key to biological study notwithstanding there are those who decry this kind of mental employment as unpractical, and boast of their own ignorance as a city beauty sometimes plumes herself upon her unhealthy pallor.

Near the beginning of this century the chemist Dalton revived that lucky guess of Leucippus about the constitution of matter, making more probable his notion that it is formed of particles infinitely small, called atoms. This proposition and its concomitants is made use of in the most advanced physico-chemical theory of life, the outcome of the modern method of approaching this perplexing problem. The universe is conceived to be composed of these indivisible points, which are held separate forever, with interspaces wider than their own diameters. The densest equally with the most attenuated bodies are made of these hypothetical atoms. All objects judged by the eye as sublime or mean are as one in this. The ever-during cliff and the surf that beats upon it, the mud-hatched worm and the man that crushes it under foot, the tall palm fixed to its birth-spot and the tiger that leaps from its shadow, the feather tossed in the wind and the fiery orb whose unequal heat drives the hurricane, all illustrate a oneness of intimate structure.

These atoms are supposed to be in unceasing motion, it may be of vibration or revolution or circulation. Different modes of motion are indicated by the forces heat, light, electricity, magnetism, cohesion, chemical affinity. Intensity of motion can be increased or diminished by communication of impulse to or from other forms of matter. That matter, as we know it in this era, is indestructible is now universally conceded. We have never seen it perish, nor can any one claim to have created it. A solid or a liquid may vanish, but only into a vapor, which can always be discovered by appropriate tests. Countless changes may be impressed upon it without appreciable loss. Such a thing as dead matter, vaguely so called, has never been revealed. It is not like a bundle of fagots, in ordinary experience, to which a flame must be applied before it is kindled. In its humblest and most quiet condition nature's vestal fire is secretly burning. When it is said that this thing is dead and that alive, that this is at rest and that in agitation, we use the words in a contracted sense, meaning, in fact, that a particular kind of force is present or absent. Nothing is absolutely inactive.

If we sharpen our senses by the aid of instruments, such an imagined state as rest will disappear from our minds at once. Every star wheels on in its God-given groove. The revolution of the earth spreads the panorama of a rising and a setting sun alternating with the nightly march of the constellations. Winds disturb the air and play at shifting the wondrous scenes of cloud-land. Unresting change reigns in the granite hills and in the watery world. Quietly the plant transmutes the soluble elements of the soil and formless gases into its fiber, and subsists by the motion of its juices. These movements on a visible scale are the analogues of motions seen only by the mind's eye as incessant in the particles of bodies which become apparent in the ardent clashing of combustion, the brisk vivacity of effervescence, and the orderly accretion of a crystal. The flinty pebble as well as the soft animal tissues are maintained as such by the motions of their atoms. Nature's life is force playing in and among multiform masses of atoms, ever changing, but without loss or gain. This is the speculation adopted by the new philosophy, and the physiologists who work by it conduct their researches regardless of what was formerly considered an impassable gulf between physics and physiology.

Examine with me one of the most interesting manufactures known to the arts—a paper-mill and printing-press under one roof. Rags not woolen, of high and low degree, are by machinery dusted, boiled, then torn into shreds, which are next put in large vessels with revolving arms. Here the mass is reduced to a coarse pulp, which when bleached is further comminuted by a beater, and mixed with water until it has the appearance of milk. A regulated supply of this liquid pulp flows over a wire frame, where it is spread evenly, and the water drains away. Compressed upon felt, it is further deprived of water, and dried over steam-heated rollers, to issue finally in a continuous sheet of paper, with a texture wonderfully tenacious. Fed to the press of a daily journal, this paper is at last delivered into your hands, informed on every side with yesterday's transactions all over the civilized world, and pregnant with great thoughts to rule the policy of a nation.

One mechanical motor has wrought an incredible change; vile rags have come to bear momentous tidings or sound the alarm of a revolution. Many pieces of machinery are required to accomplish through many stages this marvelous result, but only one power. By proper apparatus steam is made to supply energy to the wheels and cylinders, which by their peculiar arrangement determine the kind of work done. Let the steam be shut off, and all this skillfully contrived combination of workers is as idle and valueless for this purpose as the unquarried ore.

So in nature it is assumed that one force operated by the First Cause in many ways upon different kinds of matter produces results infinitely diversified. It is one protean force, imminent in matter, whether it be manifested in the tempestuous seas or the chemical affinities of unlike molecules; whether it be the gravitative attraction which keeps order in space or the mysterious sympathies of a magnetic needle made to veer alike by a particle of iron and the auroral light; whether it be the lively reactions of a photograph-plate or the vast activities of the organic kingdom.

Let us seek some illustrations of the unity of physical force, and then widen our survey to its relations with vitality. On applying heat to water expansion occurs; in other words, impulse derived from combustion is divided among the imperceptible atoms which extend the range of their excursions so that the general bulk is increased though the weight remains as before. Further addition of heat will cause the liquid particles to sweep beyond the sphere of mutual attraction into the vaporous state, as steam. The original particles, unaltered as to weight or number, move with such activity in repulsion that steam becomes a store of enormous mechanical force, which is made actual when it moves easily the ponderous beams and other dependencies of an engine. The rise of mercury in a thermometer held near that gas-jet means that the gross motion in the column followed the increase of molecular movement which radiated from the burning gas. A change of guise takes place in heat when it is applied to the joint of two metals; currents of electricity are set moving which can again generate magnetism in a coil of wire. Many processes of the laboratory sufficiently show the power of heat to assist chemical affinity. A striking exhibition of heat changed to light is seen when a non-luminous flame is made splendid by the introduction of a piece of lime. Whenever energy in action has seemingly ceased, and sunk from sight and touch, our instruments, with sensibilities more acute, inform us that near by, in a new shape, it has sprung into effectual life.

Applause is an inexpensive compliment; in conferring pleasure you lose nothing. On clapping your hands together the force of motion is suddenly arrested; it is not destroyed; for, besides the acquisition of a quicker pulse and breathing, your palms are sensibly warmer. Motion in mass has ended in the fine vibrations recognized by the brain as the sensation heat. Motion stops when the hammer of a gun strikes the percussion cap, but heat is produced to explode the powder. You strike a light with a match by the heat excited through loss of motion in friction. In every case the heat arising is equivalent to the mechanical motion disappearing.

By vigorous friction of a rubber ruler with a woolen cloth it is made strangely attractive to feathers and bits of paper which leap to it. Motion is here converted into electricity, which is reconverted into the motion of attracted bodies. Likewise in cutting a pine stick the shavings are made so electrical as to separate the leaves of an electrometer. Pass the current of a glass-plate electrical machine around an insulated helix with an iron core, and the motion of turning the winch becomes at first electricity in the plate, and then magnetism in the iron; if sparks are drawn from the conductor, light is a third offspring. To show that the several forms of force—electricity, magnetism, and chemical affinity—are transformable into one another or into other forms, as light or heat or motion, we have but to adapt accordingly the apparatus used in the instances just mentioned. These experiments prove not only their convertibility, but when carefully conducted will probably establish that from a given quantity of one definite amounts of the others will be produced.

The next step in this inquiry takes us into a higher realm of nature, where a more rewarding prospect opens. Though minerals may have exquisite figures, with surfaces as symmetrical and angles as true as the lapidary could have made; though the moss-agate you wear has a kind of internal arrangement, yet these never display a complex framework with peculiar aptitudes. Only plants and animals are built upon such a plan, termed organic, which modifies the operation of force. In the "red snow-plant" all the appliances of vitality are contained in a single sacful of liquid barely discernible with the unaided eye. It appropriates material for nutrition, and reproduces its like within this narrow compass, where no separate organ can be detected. Our bodies are accumulations of differentiated cells, essentially the same, with a higher inheritance. The cell is the special vital tissue by virtue of which all animate things are enabled to feed, move, breathe, and procreate. As the fabled Orpheus with his lyre compelled stones to dance into architectural order, so a principle resident in organic cells constrains atoms to fall into regular combinations that determine vitality. When the wheat grains were taken by Von Sternberg from a mummy-case they appeared wholly inert, but sown under favorable auspices they expanded into plants perfect after their kind. For thirty centuries these seeds enjoyed no more life than did the entombed Egyptian. Each grain, seemingly lifeless, contained a germ-cell instinct with dormant energies. Buried in a soil generous with heat force, it awaked from its slumber of ages and appropriated the impulses of molecular motion conducted to it. Its store of starch was suitably altered, and then worked up into cells of characteristic shape, which received in turn a heritage of constructive ability. These multiplied so rapidly as to protrude upward and downward from the seed, and thus stem and rootlet were formed. The food laid by is now consumed, but the little plant has an organization which enables it to harness the physical force in the forms of heat, light, and chemical affinity, and by their aid food is collected from the neighboring earth to be elaborated by the subtile alchemy of the cell into vegetable tissue. The part which has pierced the mold unfolds itself, and a new organ, the leaf, is revealed. Up from the humid ground comes the sap to be carbonized in the leaf, where the oxygen, which was united with carbon and hydrogen in the air, is rejected, the other elements being retained to form wood and other structures.

These processes require for their support food from the earth and air, and working stimulus from the physical force. It is not a stimulus merely, for considerable expenditure is necessary to assimilate the nutriment and afterward adjust and utilize the new matter in the vegetable members. Definite quantities are used in increasing the substance and extending the organization. Emaciation follows the reduction of the proper allowance of force as inevitably as it would the abstraction of food. If absolutely debarred from regular supplies, plants starve and die. No germinating movement stirs the atoms when heat is below freezing-point; but above that temperature, and within certain limits, an exact correspondence holds between them.

In malting barley incipient germination is brought about artificially. The moistened seeds are heated by their own slow combustion, and a forced growth ensues upon every exaltation of temperature. In the soil, sun-heat penetrating to some depth, is the source of development. When the leaves are exposed to the air sunbeams are made to work for every function. When we consider the vigor and the colors of a sun-bred plant as compared with the wan and sickly thing which grew in shadow, we can not escape the conviction that the force which kept up its multifarious workings emanated from the sun. Lack of heat makes the frigid zone nearly barren, while a flora more and more luxuriant delights the senses as we approach the tropics. The short-lived lichen, which amid Alpine or polar snows lends scanty gladness to the sterile aspect of the scene, joins its voice to that of the gigantic palms of the equator, whose existence dates from prehistoric times, to proclaim the entire dependence of the vegetable world upon the three varieties of force bound together in the sunbeam. No violence is done to your judgment then when it is said that not only is a constant ratio observable between the force of mineral matter and the vital force of a plant, but they may be regarded as identical.

In the development of an animal from the embryo relations of cause and effect are observed like those between heat and germination. In an egg are unformed provisions prepared by the parent, and a germ which, when subjected to the heat of the hen's body in hatching, or that of a regulated oven, divides again and again. Multiplied many times by the operation of this transformed force, these cells, according to a central law, exhibit diversified qualities to frame the different parts of the chick. It is not thrown amid the exposures and wants of an independent existence until its organs are fitted for seizing and digesting food.

The after-life is a procession of changes known as growth and decay, during which materials from without are assimilated by a series of motions working in harmony with external force, and maintained by the heat resulting from respiration. A familiar fact is recognized when it is stated that directly or indirectly all animal life is sustained by vegetation. An eternal round of force and matter, set forth in various forms, nourishes the plant at the expense of the earth and sunbeams, the animal at the expense of the plant, and then returns to the earth that which it had lost. A vegetable is like this audience, where I see many assembled for one social object. Though the mass engages attention, each person here has a distinct inner life analogous to the hidden power of tissue elements. The plant has one life; its organized units have another; and as the individuals who hear me live on, though the meeting dies with the occasion, so these proximate units, alive with energy, separate to flourish shortly in the animal sphere. A plant serves as a medium for storing up solar force, which is afterward transferred to the animal. The sum of all the forms of force disengaged in the human fabric is believed to be an equivalent of the force evolved originally by the sun and locked in the atoms of food till animal processes liberated and utilized it. We are indeed "servile to skyey influences," but in other ways than the poet dreampt of; for see how closely in this respect we resemble a steam-engine! It is fed with coal which represents the rich vegetation that long before our time laid by a treasury of sunbeams lavishly spent to-night in the coal-gas which illuminates this room, the fire that glows upon the hearth, and the furnace-heat that drives many an engine over land and sea. We are nourished at last from the magazine latent in the vegetation of our epoch. Air is furnished to both, to the furnace and to the man; and from the reactions between air and the combustible material of food and fuel, heat is begotten to do mechanical work or carry on the functions of life. In respect to its periodical renewal Liebnitz likened the human body to a flowing river; Cuvier compared it to a whirlpool, where substances were spun about for a while, giving place to other whirling parts; Helmholtz sees a more exact analogy between it and the steam-engine, and his calculations inform us that the human machine is a more perfect instrument for *mechanical work*, realizing, as it does, more of the motor energy of its food.

It has been said that a bird is a great eater; though it eats but little at a time, it depends upon having the table always spread. Ruskin says of it: "It is little more than a drift of the air brought into form by plumes. The air is in its quills, it breathes through its whole frame and flesh, and glows with air in its flying like a blown flame." What becomes of the force resulting from the combinations of food and air in quantities relatively so prodigious? In the first place, extraordinary heat is developed; while a man's temperature never exceeds in health 99° F., that of a bird reaches 110°. Secondly, mechanical motion is excessive; one weighing twelve pounds will evolve the enormous motor force of one-horse power. The lungs which breathe in the oxygen and the blood which circulates it, the nerve which perceives, the brain which commands and the limbs that obey, the stomach which digests and the chyle which revivifies, are indebted to the varied play of solar force, the mainspring interacting with their functions.

The microscope has resolved into nothing the line of structural difference once drawn between plants and animals, and the new departure of physiology finds but one fundamental basis to the life of man and that of the hyssop on the wall. An essential unity exists in the nature of the animating principle of a stone, of the lowly plant of a day, and of the proud being who has received from their Artificer the ability to comprehend these high questions that "stand up like church-spires 'mid village cots." The circle of creation has man at the topmost part of the unbroken line. He alone, like the eagle that kindles his eye in the beams that vail the awful splendor of the sun, can catch from the center of intellectuaal light, through the glory of His works, the radiance of reason. The history of the animating principle is now an open book that confirms a belief in one creative mind, and does not conflict with an instinctive feeling of immortality when it puts down vital phenomena under the heading of material motions.

It is a custom of long observance that he who, in the name of the faculty, bids you welcome should also deliver some precepts upon the ethics and aims of a student. Having introduced you through the Gate Beautiful of physiology into the Holy City of medicine, the best advice as to conduct that I could give is, take as your exemplar the honored teacher but lately removed by death from this field of usefulness and renown. One who as pupil, co-worker, and friend knew him well shall in eloquent eulogy recount the story of his lofty life.

He to whom our dead friend bequeathed his mantle shall worthily wear it, but those of you who have associated with Prof. Bayless will often in your wayfaring miss him whose temper, so earnest, was ever cheerful; whose undaunted spirit attended like a loyal servitor upon his sober judgment; whose faculties, so finely poised, were held in constant adjustment by an intellect comprehensive and tranquil. Who that loves the pure and true can forget him who wedded dowerless Truth for her own sweet sake, and remained faithful through weal and woe? His old students, sitting in the halls that for years have echoed to his well-told wisdom, shall long for "the sound of a voice that is still." Not in vain has he lived among us is the feeling of a large community whose gayety was lately beclouded by his death. Not in vain has he given to us his best brain-work is the testimony of physicians all over the land, who caught up for further use the fruits of his experience. The good that he has done lives after him. We can embalm in our memories the precious body of his teachings, while we emulate the course that made him a leader of medical opinion, a skillful healer of disease, a loved kinsman and friend.

EPITHELIAL CANCER OF THE COLON.

BY S. LITTELL, M. D.

The following case, which was seen at different times during its progress by several of the most distinguished physicians and surgeons of the city, is interesting chiefly from the obscurity of its diagnosis. Its true nature was revealed only by the autopsy.

E. L. C., aged forty-nine years, of small stature and slender form, married and the father of six children, complained of pain in the left dorsal region, constant in its character, but unattended at first with any considerable constitutional disturbance. During several months there was no external sign of the mischief which was evidently going on within. The bowels acted as usual, the renal secretion was unaffected, and the deep-seated pain, often very severe, was almost the only symptom on which an opinion of its nature could be predicated. As the disease advanced the pain extended downward into the left iliac fossa, and there was also some limping in the walk, evincing probable implication of the psoas and other muscles. An abscess was of course deemed probable; but it did not possess all the characteristics either of lumbar or of psoas origin, though its possible foundation in caries of some of the lower dorsal vertebræ was not overlooked. Calculus in the substance of the kidneys and cancerous degeneration of that organ were also suggested; but these were mere conjectures, unsupported by any particular evidence. A hardness and tumefaction, which had for some time been noticed, at length became more distinctly perceptible posteriorly, a few inches to the left of the spinal column; and the swelling gradually increasing, the apex was finally opened, discharging a large quantity of very fetid matter. Great relief followed this evacuation; and for a brief space there even seemed to be an attempt at reparation, as there certainly was some improvement of the general health. He regained, in part at least, his appetite and spirits, and visited the sea-shore with hopes of still further amendment; but these unhappily were soon dissipated by the occurrence of signs denoting the existence of perforation of the colon. At this juncture, his attending physician having gone to Europe for the benefit of his own health, he was seen for the first time by the writer. The perforation was manifested in the beginning by the escape of flatus, and afterward of fecal matter, through the external opening. This continued and increased until eventually all the contents of the intestines passed in that direction; nothing finding its way, or only in small quantity and at long intervals, through the rectum. Long time before this, however, the system had begun to sympathize with the local disorder. Hectic fever supervened, the emaciation became extreme, and worn out by suffering patiently and heroically endured, the poor fellow found relief in death about a year after he first came under treatment.

The autopsy revealed adhesion of the colon to the abdominal parietes at a point nearly on a line with the upper margin of the kidney, perforation of the bowel, penetration also of the peritoneum, and an abscess caused by the extravasation of fecal matter between the peritoneum and the integuments, extending downward through the intervening cellular tissue into the left iliac region. The transverse colon had apparently fallen or been drawn down near its curvature, and was likewise adherent at this point; the series of morbid changes furnishing a striking instance of the restorative efforts of the *vis medicatrix*. The perforation was produced by a malignant affection of the mucous membrane of the intestine, consisting of dark-colored, soft, fungus growths; the largest of them about the size of a small mulberry (to which it was not unlike), melanoid in character, and, as was proved by microscopical inspection, of indubitable cancerous nature. Several of these excrescences of smaller size were scattered at irregular distances along the transverse arch of the colon; one, situated a few inches above the adhesion, had also proceeded to perforation at its base, but the opening being small—only admitting the introduction of a probe—had not yet been followed by extravasation.

A brother and sister of the patient had died of what was supposed to be cancer of the stomach and bowels; and a female relative of the family, though not in line of direct ascent, had likewise fallen a victim to the disease; circumstances which, had they been earlier known, would have afforded a clearer insight into its pathology.

PHILADELPHIA.

AN ADDRESS ON THE LIFE AND PROFESSIONAL CHARACTER OF GEORGE WOOD BAYLESS, M. D.,*

BY RICHARD O. COWLING, A. M., M. D.,
Professor of Surgical Pathology and Operative Surgery, University of Louisville.

MR. PRESIDENT, LADIES, AND GENTLEMEN:

A month ago, when the first note of preparation for the preliminary term of the present session had sounded, when each man's work and station had been assigned him, while we were watching for the return of one upon whom in times past we had relied so much, we received the sad intelligence of the fatal stroke which had befallen him, and that his place among us was to be forever vacant. A leader in our ranks had fallen; a light in our profession had gone out; the heart of a true friend was still. Well might the University of Louisville bewail the loss of one who had done so much to make her history; well might all who value truth and nobility lament that such a representative of these as Prof. Bayless had been taken from us.

I thank you, gentlemen of the board of trustees and of the medical faculty, that in the resolutions by which you sought to express your sorrow you appointed me to deliver to-night this address upon his life and professional character. Much did I wish, however, that one who had stood longer by his side, one far abler than I to do justice to his memory, could have accepted the task; but I feel that no one could appreciate more keenly than myself the character I am asked to depict; and though the tribute I offer be imperfect, it will at least be the sincere expression of one who was a grateful pupil, a loving friend, and an admiring associate of him who now is dead.

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* Delivered, October 6, 1873, at the request of the Trustees and Medical Faculty of the University of Louisville.

George Wood Bayless, the son of a merchant of Mason County, in this state, was born at Washington, the county-seat, in 1816. His parents, who in his early life were in easy circumstances, gave him the best education within their reach. Intended at first for mercantile pursuits, he entered when quite young the business-house of a relative, Mr. Abijah Bayless, in this city; but he soon abandoned the idea of trade and returned to his home, where his education was resumed. He finished his academic life at Augusta College, where for two years he received the instructions of the celebrated Bishop Bascom. His family in the meanwhile had met with reverses in fortune, and it was at personal sacrifice, especially upon the part of his mother, that his academic and subsequent medical education was carried on. I allude to this here because the memory of this devotion never left him during life. Reticent as he was by nature, he often spoke of it, and the remembrance of it perhaps had much to do with forming a filial piety which was well-nigh perfect. That the foundations of his education were well laid no one could doubt who heard the purity of his language and knew the cultivation of his tastes.

He commenced the study of medicine in the office of Drs. Taliaferro and Marshall, then of Washington, at later life practitioners of eminence in Cincinnati. After a year's pupilage under these gentlemen he entered as a student in the old Medical Institute of Louisville, which afterward grew into our present Medical Department of the University. This was in the fall of 1837. It was the year of the real birth of the school, when, after the disruption of the faculty at Lexington, Cook, Caldwell, and L. P. Yandell, sr., joined with Cobb, Miller, and Flint to form a corps of instructors seldom equaled in the annals of medical teaching in this country. It was of course not strange that they should have made a powerful impression upon so appreciative a mind as that of young Bayless. In his introductory address to the class of 1866–7 he beautifully records his admiration for his teachers; but favorably as he regarded them upon the whole, he did not attend a second session at the school. The reasons I have heard him give were that, even with his inexperience, he felt that the doctrines of practice which then emanated from the school could not long prevail, though so brilliantly taught and so universally accepted. Wishing to hear another side of the question, in the autumn of 1838 he matriculated at the University of Pennsylvania, in Philadelphia. He was graduated in the following spring, and added one more honorable name to the long roll of that ancient mother in medicine.

He spoke but seldom of his student-life. The daily routine, faithfully followed as I know he followed it, offered but few incidents for the mind to recall. "He was," says his roommate while in Philadelphia, "an earnest student, attentive to all his duties, methodical in his ways. Just as he was in later life, so was he in the beginning. His character was early and fully formed."

Of the faculty of the University, comprising at that time Wood, Gibson, Jackson, and Chapman, Wood was the one of whom he oftenest spoke. His polished manner and varied learning made a deep impression on him; but a greater link between them, I believe, was their common love for botany and flowers, which through life with Prof. Bayless amounted to an absorbing passion.

He commenced the practice of his profession in this city immediately after graduation. With an exceedingly youthful appearance, and with slender means, more than the ordinary struggles of the young practitioner awaited him. "I was very poor," I heard him say, "but I was determined at the outset that my poverty should not be a temptation for me to form any associations which for temporary advantage might injure my permanent welfare;" a resolution he faithfully kep through life.

He spent much of his leisure time, which was ample, in the wards and at the clinics of the city hospital. Since his studentship in the medical school of Louisville Daniel Drake had replaced Cooke in the chair of practice. Dr. Bayless early attracted the notice of this distinguished man, and a lifelong friendship sprang up between them. It had much to do with the shaping of his subsequent career. Greatly through Prof. Drake's influence he was elected to the demonstratorship in the college, when a vacancy occurred in that department, one year after his entrance into the profession. This position he held for eight years, and it was the period of his life to which he referred with the greatest pleasure. His subsequent elevation to the chair of surgery, to which he had for years aspired, did not give him half the pleasure as that of his first triumph.

He had early been devoted to anatomical studies. In his "Reminiscences," to which I have alluded, in speaking of the fact that the college at the time he was one of its students was in the old alms-house, which was under the same roof of the city work-house, he says: "Many a time and oft have I found myself in the wee small hours of the morning pursuing my anatomical studies alone by the light of a tallow-candle, with the clanking chains of refractory prisoners as the only music to cheer my solitary work." But attractive to his tastes as was the field thus thrown open to him, it was a trying position for one so young. A chief reason urged for the establishment of a school at Louisville to compete with the one at Lexington, already in the full tide of fame, was the superior advantages offered by a populous and growing city for the study of anatomy. This assertion Dr. Bayless was expected to make good; and while just a man in years, and to all appearances a boy, he was intrusted with duties considered of vital importance to the school, and was to take his stand among men every one of whom had already written his name high in the annals of medical teaching.

His first essay as a lecturer was in a course upon visceral anatomy, given at the suggestion of Professor Gross during the preliminary term of his second winter in the school. It was prepared and delivered with all the ardor of one thirsting for success, and no work in his life did he ever recall with more satisfaction than he did this. How well Dr. Bayless fulfilled the trust which had been reposed in him the hundreds who received his instructions are his witnesses. Their universal testimony is to his thoroughness and ability.

He gave himself up almost wholly to his duties in the school. His office required him also to be a curator of the museum and prosector to the chair of anatomy. "I spent eight years," he says in his reminiscences, "upon the opposite side of a dissecting-table with Prof. Cobb," as perfect a master in dissections as this country has ever produced. It was a magnificent school for the young demonstrator, and he improved it to the utmost. I never saw his superior—seldom his equal—in the use of the scalpel. Around me now are those who can bear witness of how he enriched our museum with his skill. He extravagantly admired his anatomical master for his skillfulness in dissections, his industry in making anatomical preparations, and for his gracefulness and ease as a lecturer; but he found fault in him—that he never looked for design, had no thought for philosophy. These were ever uppermost in Prof. Bayless's mind.

His studies were not confined to the anatomy of the dissecting-room. He seized every opportunity for pathological investigations, and worked well at histology. In his private classes he taught too for years all the branches of medicine. Nor did he confine himself to purely medical topics. He studied comparative anatomy and made himself conversant with vegetable physiology. He was familiar with the use of the microscope long in advance of his times in this section. Had choice been left him, I heard him say, he would have devoted his life to the natural sciences. Toward the end of his demonstrator's life he delivered a course of lectures upon vegetable physiology, "which," says Prof. Bell—certainly no mean judge in such matters—"showed him a perfect master of his subject." He made valuable discoveries in the flora of this country, and as a horticulturist received public recognition of his ability and tastes when the city of Louisville appointed him among the first trustees who had in charge the beautifying of the grounds at Cave Hill.

I have dwelt long upon this portion of his life because it was the period of his preparation, and made him what he was. In later life, when the cares of an extensive practice and of his material interests drove him in a measure from his books, these were the sources from which he was deriving his information.

In the eighth year of his demonstratorship, when the school was in the full tide of success—his classes more numerous perhaps than those of any demonstrator in the Union—his failing health required him to resign his arduous position. He went with Dr. Drake to Cincinnati, and occupied for two years the chair of anatomy in the Medical College of Ohio. He had also purchased a farm in Western Missouri, and devoted the interim between the sessions of the school to its cultivation. But the arrangement of living in one state and lecturing in another did not work well; so he retired from the school and resided permanently in Missouri.

Although during his residence in the West he was withdrawn from the active duties of his profession, he continued to act as a consulting physician and did such surgery as offered. Several of the gravest and most successful operations of his life were performed during this period. The growth of his family and the lack of educational advantages brought him again to Louisville in 1857, when, with health restored, he resumed the practice of his profession. Called during the first year of his return to the chair of physiology and pathology in the Kentucky School of Medicine, he filled it with great credit till the temporary disruption of the school at the breaking out of the war. It was his extreme desire then to lend his surgical aid to the army of the Confederacy, in which he had an offer of a commanding position, but which the claims of a large and dependent family forced him to decline. He obtained permission, however, to pass the lines, and was present with the wounded after the first battle of Manassas.

In 1863 he was elected to the chair of physiology in the University of Louisville, which he occupied for two years. At the death of Prof. Palmer, in 1865, the chair of surgery became vacant, and for this he became a candidate. It had been the ambition of his life to fill this chair. He had striven to educate himself for its duties during more than a quarter of a century; and although he felt that his claims upon the position were almost paramount, I know that he was willing to waive them for what he considered the good of the school. But the arrangement he had in mind could not be effected, and he entered upon his long-wished-for field.

The rest is soon told. During five years he was permitted to gather the fruits of his grand preparation; and then when his experience was ripest, when his powers were greatest, when seemingly in the fullest of health and vigor, looking forward to years of work and usefulness, he received the first sharp notice that the end of his labors was near at hand. He recovered somewhat from this his first stroke, and with a winter's rest appeared once more in the amphitheater which we hoped with duties lessened he might continue to adorn. But it was evident to those who knew him that the stroke had been graver than we wished to believe. The same perception of truth remained; the same beauties of diction were at his command; but the incisive manner was somewhat lost, and the voice which of old was so clear and ringing would sometimes falter. And so, though we heard from time to time during the past summer that with the invigorating air of the mountains in Eastern Kentucky, where he had sought repose, his health was returning, pained though we were at the tidings that his end had come, we felt that it was our hopes and not our expectations which had not forewarned us. When he recorded of his bosom friend, the philosopher Drake, that "when death came upon him he attacked him in his most splendid part, the brain," he was writing his own end. So too had fallen the classical Flint, and the lips of the eloquent Palmer been sealed forever.

Though he died upon the opening day of this preliminary term, upon the eve of his return to his much-loved duties, for which he had striven during preceding months to prepare himself even better than of old; though his heart yearned to be once more in the midst of active and useful life, the closing scene could not have been fitter. He was returning from the search of wild flowers in company with his youngest child. As he descended the mountain-side, when within sight of his family, whose anxious eyes were ever upon the outlook for his coming, he sank to the ground. Though death was delayed a few hours, the last sight he saw on earth was the grandeur of that nature he had worshiped through life, her beauties within his grasp, and the forms of his loved ones around him.

So closed a life which, if not filled with stirring events, was marked from first to last with the faithful performance of duty. In seeking to make an estimate of his character, I can not separate that which was professional from that which was personal. His commanding trait was certainly great integrity. To say that he deceived no man — that dishonesty of word or action could never be laid at his door— would be but a poor expression of his uprightness. He was the embodiment of truth. The fullest of his perceptions of it he strove to illustrate in his life. "Why should not men be true," I have heard him say, "when it is so easy? Truth is in the eternal fitness of things, and flows along so naturally, while deceit and error jostle against every thing they meet." And he was fitted by nature to be a defender of this jewel. He was a brave man—morally and physically brave. With thoughts and feelings thoroughly under control, he rarely had a foolish impulse to regret, an unguarded expression to retract. When he took his stand he was inflexible. No flattery, no cajolery, no temptation of interest could swerve him from what he considered the path of his duty. He postponed no difficulty; he never sought by double-meaning phrase to leave a door for escape. No man of ordinary intelligence ever left his presence without a full perception of the meaning he intended to convey; and no one had dealings with him who did not learn that by his word he stood. I do not mean to convey the idea that he engaged in a foolish knight-errantry for the cause of truth; that he considered he had a mission to reform men, or to bring them to his own ideas; that he passed his life in endless contention. No man more strictly confined his attention to his own affairs, or could more gracefully yield where principle was not involved.

That one so decided in his character should have had difficulties and have made enemies is not strange. He lived through trying times in his profession, through the bitterness of the school-fights, through the jealousies roused by his increasing fortune, as he rose from poverty to easy circumstances. Through all these he pursued his way quietly toward his ends, which he generally achieved. And as no murmur ever escaped him in defeat, so never did he utter a shout of victory. Whether he won or lost, the same calm exterior was over all. His reticence was wonderful. While the buzz of his adversaries and their partisans was loudest, he seemed either not to hear it or treated it as the idle wind. Recrimination was a word of which he knew not the meaning.

When I said he was physically brave I did not mean he was a hero in personal rencounters. The refinement of his nature shrank from the brawl. The decision of his character, his sense of justice, and the politeness of his manner even when most severe, won his battles without such coarse display. And there was something in those steady blue eyes, and in that well-knit frame, small though it was, which was not inviting to such an appeal.

He lacked personal magnetism which wins at once. With the crowd his manner, while not austere, had that quiet dignity which forbade all familiarity. I think it was frequently misunderstood; and men who either had not the occasion or wish to know him further gathered an impression of his coldness, or even selfishness. Enthusiastic he certainly never was, but he was no adamantine man—a machine that thought and acted and did not feel; one so full of the virtues and free from frailties as to make him uncompanionable for this wicked world. Friends he had in hosts, and if he gained them slowly he held them firmly. The companions of his boyhood were his friends through life. He had no suspicion of human nature. He would have deemed it an imputation on his self-reliance. He loved the companionship of his kind. Not a day passed that at his hospitable board there did not sit many besides his own, nor a night when his friendly roof did not shelter others. And he shone in social life, not by brilliant and showy manners, but his intelligence, his frankness and candor, and the sympathy which then warmed in him made him a companion for young and old. Reticent too as he was with the world at large, there was an inner circle of those he loved, where he poured out his joys and sorrows, his hopes and fears, with the simplicity of a child.

That he strove to increase his fortune, and did increase it, was no sign of selfishness. He grasped nothing. He claimed his own, and never did he believe he encroached upon the rights of others; and with his own few stewardships will stand better than his. When I spoke just now of his rising from poverty to easy circumstances independence was the word I had first chosen, but independent he ever was. Trained early in habits of business with a spirit of self-reliance and the warnings of adversity, debt he abhorred, obligation he avoided. Whatever might have been his means he forced himself to live within them. He deemed it not only weakness but positive injustice to exceed these bounds. Little did it require for his own simple tastes, but to those who had claims upon his bounty he freely gave. Do I violate propriety if I lift for a moment the vail from yonder household; if I point to that happy home where he was best known — where a kind and indulgent father and husband ruled so orderly and so easily—where loving hearts looked up to him with gratitude and respect — more of which the patriarchs of old did not receive; and though he deemed his own blood first upon his claims, though he spoke but little of aid and sympathy spent elsewhere, he had his share of these to do, and did it manfully and well. How many thought him good and true let the bowed heads in yonder church declare; and the flowers which freshen daily upon yonder mound shall tell how fragrant is his memory in the hearts.

For his profession he had the most unbounded respect. He used to say it was a priesthood with responsibilities as grave as those of any other. In his farewell addresses to his classes this was always the theme upon which he dwelt, that it was not the only part of medicine to recognize disease and to give physic, but they were to remember how sacred were the relations between their patients and themselves. This he never for one moment forgot. With him, as some one has expressed it, "the genius of medicine is dumb, standing with finger upon her lips in token that nothing that the eye or ear received should ever pass their portals." Surely no secret ever was confided to that breast which is not safe till the judgment. But it was not alone upon this virtue of secrecy, so common to his profession, that the respect with which he was regarded by his patients was built. He impressed them with his manly qualities not less than with his skill, and many a one has he ministered to whose complaint was not bodily.

As he regarded medicine as high a vocation as any man could have, he claimed from it proper returns; and in his dealings with his patients, while he did them proper justice, he never forgot what was due to his profession.

With his professional brethren he ever wished to be at peace. He had such respect for medicine that he believed that any one who followed it was naturally respectable, and was slow to be convinced to the contrary. Jealousy he either did not have or effectually concealed it. He seldom discussed doctors, but when he did he expressed his admiration freely when he felt it; and while he was not afraid to denounce if he thought he had cause, he could be just even to an adversary. The mistakes or discomfiture of a brother gave him no pleasure. Gossip, and especially professional gossip, he despised. He seldom listened to it, never repeated it. To his juniors he was ever considerate.

As he was respectful, so did he always expect, and if necessary could command, respect. I utter at least an honest belief when I say that never was a physician in his professional intercourse more upright than he. Never did one observe the proprieties of the code which governs doctors more strictly; and this he did not from any fears of penalties imposed, but because his every action was dictated by his natural instincts as a gentleman.

When the news of the death of Dr. Bayless reached Prof. Gross, he said: " My intercourse with him was constant and cordial. A more amiable, kind-hearted, upright, honorable man I never knew, either in or out of our profession. As a teacher he was highly popular and instructive; as an officer, agreeable and faithful. He knew not what it was to neglect a public or a private duty. His intercourse with his professional brethren was marked by the nicest sense of honor. The death of such a man at comparatively an early age is a public loss."

As a practitioner of medicine he was attentive and eminently safe. He rode no hobbies and had no pet theories he wished to prove. His practice was built on broad principles as he had learned them and as his experience had proved best. He did not have infinite respect for the last journal—was indeed slow to believe the wonderful reports of ephemeral writers; but no one could say he ever became antiquated in his views. The foundation of his knowledge had been too solid for that. He took a grave view of disease. He thought sick people needed help; but while he was often anxious he was none the less confident in his powers. He had little to say in the sick-room. His examinations were soon made, and his pharmacopœia eminently simple; he was not a strong believer in drugs.

Surgery was the field which was most in accordance with his tastes, and from it, had he had choice in the matter, he never would have deviated. The bent of his intellect inclined him toward this department of the profession. With his practical nature he was slow to follow theoretical reasoning—quick in that which was demonstrative. The training of his professional life too had been in this direction. To the last he was an accomplished anatomist and pathologist. His quick eye ever momentarily detected every tissue and part he invaded, no matter how changed in relation.

In his practice he aimed always at conservatism; and when he had declared for the knife he was one of those who, if circumstances allowed, always prepared his patient. In his methodical way he provided for every exigency; and whether the operation was to be simple or grave, he considered it well beforehand, and thoroughly planned its steps. He believed with Sir Charles Bell, whom he used to quote in this connection, that the patient was entitled to every chance; that no matter how often the surgeon might have repeated an operation, he should, if opportunity offered, practice on the dead beforehand what he was to attempt on the living. This extreme caution to one who did not know him thoroughly might rouse a suspicion of timidity, but there scarcely could have been a greater mistake. No man was ever more at home in an operation. After he had begun there was no hesitation, no timid incisions, no halting to take counsel. Unappalled at any danger, familiar with where he was going and what he was doing, thoroughly and rapidly he finished his work. No one could look upon the bold strokes of his knife, could witness the rapid and clean dissections, and not see in them all a master's hand. Few men were his equals as an operator.

He was a conscientious surgeon. He decided entirely for his patient's benefit. He took no thought for himself in the matter. If he considered that any chance for relief, however slender, lay in the knife, it never entered his head to think, or at least to care, that he would suffer by any mischance that might happen. While I believe he sometimes overestimated the powers of his art, I know of lives he preserved, by lucky chance perhaps, which surgery had condemned to die. But whatever was the issue he accepted its full responsibility, and with his characteristic candor never sought to conceal or to palliate an unsuccessful case. Remembering only such, however, a cry at one time arose that he was "unlucky" in his results—an opinion which some of his professional rivals and non-professional enemies "would not willingly let die." Fortunate would it be for humanity and for our art were all the annals of medicine as honest as those he contributed.

Though his experience in surgery was large, unfortunately but a small amount of it has been recorded. Strange, with his methodical habits, he neglected note-taking as he did.

Some of his work is preserved in the journals and text-books, but it represents but a small portion of what he did. Yet he was an extremely correct and facile writer. His addresses, which are almost the only examples of his literary composition, are written in the purest English, though, as I know, they were rapidly composed and scarcely revised.

In the lecture-room Prof. Bayless was thoroughly at home. I am sure it would have surprised any one who knew him only elsewhere to have heard him there. While as a conversationalist he could be interesting and graceful, he was never voluble. He was rather an "eloquent listener." A plain and sensible lecture might have been expected of him, but one could scarcely be prepared for the discourse he would hear. Clearly enunciating his propositions, he pursued his theme with method and ease and vigor. Every syllable was pronounced, every word was well chosen and without the slightest hesitation. Commencing in a conversational tone, he rose with his subject until at times he became impassioned. His voice was full and clear, and over its modulations he had complete control. One could not help but wonder where this quiet man obtained such arts of oratory.

He had notes of his lectures, but seldom referred to them, and frequently altogether neglected them. Their purpose was rather to refresh his memory, and to fix the order of the discourse upon his mind before he began to speak. He was an original lecturer, and drew largely upon his experience for illustration, but never with an air of display; in fact, he thought his simple duty was to teach surgery and forget himself entirely. He aimed always at a demonstrative style, without which quality he thought all lecturing was a farce. Students easily followed him. They gave him the respectful attention always due and generally paid to dignity and worth, and could not help comprehending principles which were so orderly and so clearly explained, and so thoroughly driven in. Says Prof. Bodine, "He *could not* say a foolish thing."

Says Prof. Bell, who had heard him in the several branches he had taught, "In each one so much was he at home that you would say that this above all others was his field."

It was in didactic lectures that Prof. Bayless appeared to the best advantage. In clinics he did not do so well. He was not a good hand to build up a large attendance of patients. If proper cases presented themselves, and especially if operations were to be performed, he did as well as any one; but if the material was poor in the wards or out-practice, he was not so successful in filling his hour. He could not magnify small things. He stuck faithfully to his text, and if this was unimportant he soon exhausted it.

The standard of his examination of students was always pitched high. He was considered, and rightly too, a hard man to pass before. He occupied the time allotted him in rigid questioning of the candidate's knowledge, and voted faithfully for his rejection upon any doubt as to his efficiency. No man guarded more conscientiously than he the portals of his much-loved profession.

All in all he was a worthy compeer of the illustrious men his native state has furnished to the ranks of medicine—a worthy successor of the illustrious surgeons who preceded him in his chair. Surpassing him in some qualities perhaps, in truth, in dignity, in soundness of learning he was in every way their equal.

Gentlemen of the board of trustees, the commission you gave to Prof. Bayless years ago, and which now is returned to you by the hand of death, was fitly placed and worthily worn. Under its authority the best interests of the school of which you have charge and the cause of humanity were furthered. No link in our history is stronger than the one he made. As the tidings of his death shall spread to the hundreds—nay, thousands—who have heard his teachings, they will say with sorrow, "There fell an honest man," and with pride remember that he was their master.

Gentlemen of the faculty, a friend and counselor has been removed from you whose sympathy and wisdom you long will miss.

Gentlemen of the class, fortunate for you had it been could his half-finished work have been brought to a close. But as the historian of the ancient Germans has recorded, when their brave men fell they considered the most manly tribute to be offered was remembrance and not regret. Let his manliness, his dignity, his truth live in our hearts. Then happy he who when night comes can scan the day that is past and say it was as well spent as his.

TOPICAL REMEDIES IN DISEASES OF THE THROAT, NOSE, AND EAR.

BY THOS. F. RUMBOLDT, M. D.*

The usual solution of common table-salt—one drachm to the pint of warm water—I have found on the whole to be the best agent for mere cleansing of the nasal cavities. When the secretions are abundant the solution may be applied in spray or by the catheter nasal douche; but whichever mode is adopted the work of cleansing must be *thoroughly done.* This is essential. The salt solution, however, is a cleanser only; it does not deodorize. Where ozena is present a solution of bromo-chloralum, of a strength varying from two drachms to one ounce to a pint of tepid water, used by means of the catheter nasal douche, as often as may be necessary to correct fetor, is perhaps the best application. The most offensive case is usually relieved by it, at least for a time.

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* The St. Louis Medical and Surgical Journal has recently contained several articles from the pen of Dr. Rumboldt, calling attention to certain improvements which he has made in the instruments used for the application of remedies to the throat, ear, and nose. Such of our readers as are interested in these matters are referred to our valued contemporary, where the instruments devised by Dr. R. are beautifully illustrated on wood.—EDS. AM. PRAC.

For four years past I have given carbolic acid the first place among local measures for the treatment of both acute and chronic inflammations of the mucous membranes of the cavities under consideration. I use it as follows:

℞. Crys. carb. acid, ... ℈j–℈ij;
Glycerine, ... ℥j;
Water, ... ℥vij. M.

Throw on the diseased parts, by the spray apparatus, from half a drachm to two drachms of this solution every other day, or daily if necessary to control the secretion. If the nasal douche be used, the carbolic acid must be in only one fourth or thereabouts of the quantity given above, or of a strength which when applied will produce but a slight smarting sensation, lasting for a few moments only, and should, if properly used, be followed by an evident sense of relief. At the suggestion of my friend, Dr. Wm. S. Edgar, of this city, I began using a year ago a solution of the extract of pinus canadensis in such chronic cases of disease of the cavities under consideration as were attended by excessive secretion. By adding from half a drachm to two drachms of the sol. extr. of pinus canadensis to eight ounces of the carbolic-acid mixture, I have obtained a very valuable combination where an astringent and local tonic were required. The fluid extract of geranium maculatum, when one drachm be mixed with eight ounces of the carbolic-acid solution, constitutes an efficient astringent, but should be dispensed with as soon as the secretion has been controlled. The tincture of calendula officinalis, one ounce to eight ounces of the carbolic-acid solution, is useful in certain cases of subacute catarrh of the pharynx and pharyngo-nasal cavity. The tincture of aconite root, half a drachm to eight ounces of the carbolic-acid solution, I have found useful in pharyngitis accompanied by great pain, but without much swelling or secretion—cases of local hyperæsthesia. As soon, however, as the pain ceases the aconite should be omitted, lest it produce unpleasant constitutional effects. The muriate of ammonia (one drachm to eight ounces of water) is especially valuable in cases attended by a varicose condition of the vessels of the pharynx and larynx, attended either by copious secretion or the reverse, a dry and glazed condition. The remedy should be suspended as soon as the secretions of the parts are regulated, as I am sure I have seen it develop new throat troubles when too long continued. Chlorate of potash has not in my hands sustained its reputation in the treatment of nose and pharyngeal diseases. It sometimes yields good results in acute states, unattended by much swelling, but accompanied by excessive secretion. But it is not only of no benefit where ulceration is present, but is positively injurious. The sulphate of copper (fifteen to twenty grains to one ounce of water) I regard as superior to nitrate of silver in favoring healthy granulation in phagedenic ulceration; but previous to its application with a brush or sponge the parts should be thoroughly cleansed with the spray of muriate of ammonia; the carbolic-acid spray should subsequently be used in order to allay the pain produced by the blue-stone.

St. Louis, Mo.

Reviews.

Chemistry: Inorganic and Organic. By Charles Louden Bloxam, Professor of Chemistry in King's College, London, etc. With two hundred and ninety-five illustrations. From the second and revised English edition. Philadelphia: Henry C. Lea. 1873.

The above is the title of a work which we can most conscientiously recommend to students of chemistry. It is as easy as a work on chemistry could be made, at the same time that it presents a full account of that science as it now stands. The progress of chemistry during the present century has been so rapid that text-books have been demanded in quick succession to keep pace with the changes in its aspect. A century ago water was regarded by the chemists as an elementary body. The foundations of pneumatic chemistry had not been laid. Organic chemistry was a *terra incognita.* In truth, the whole science of chemistry has been evolved since some of its cultivators who have just been called to rest from their researches were born. But to-day it exhibits an amplitude of detail which defies the comprehension of any single mind. It is divided into departments any one of which affords matter for the study of a life-time. The student of medicine who comes to the subject for the first time is appalled at its magnitude, and is apt to turn away from it in despair. In the work before us, however, he will find the introduction to the study so clear that he will advance in the science with comparative ease. The author has adopted the excellent method of putting the matter of the highest value in a larger type, by which the reader may escape perplexing details in his first perusal of the work; and the style in which it is illustrated will greatly facilitate the study of the various topics.

We have spoken of the work as admirably adapted to the wants of students; it is quite as well suited to the requirements of practitioners who wish to review their chemistry or have occasion to refresh their memories on any point relating to it. In a word, it is a book to be read by all who wish to know what is the chemistry of the present day.

Pharmaceutical Lexicon: Designed as a Guide for the Pharmaceutist, Druggist, Physician, etc. By H. V. SWERINGEN, Member of the American Pharmaceutical Association, etc. Philadelphia: Lindsay & Blakiston. 1873.

This is much more than a lexicon of pharmacy, but contains besides formulæ for officinal, empirical, and dietetic preparations, selections from the prescriptions of the most eminent physicians of Europe and America, an alphabetical list of diseases and their definitions, an account of the various modes in use for the preservation of dead bodies for interment or dissection, tables of signs and abbreviations, weights and measures, doses, antidotes to poisons, Attfield's saturation tables, a table of boiling-points of various substances, chemical formulæ, atomic weights of elements, specific gravity of solids, liquids, and gases, a table of pharmaceutical equivalents, the atomic theory, and various miscellaneous tables. One would have to look far for a volume containing so much matter which physicians wish occasionally to command but can hardly hope to retain in their memories. It is therefore one which is likely to grow rapidly popular. We have seldom met with a work which it would be so convenient to have always on one's table as a book of reference. From the list of matters of which it treats the reader will perceive that there is hardly a topic in pharmacy, or one relating to the diet of the sick, respecting which information valuable to the practitioner may not be found.

The author has appended to his pharmaceutical dictionary and many valuable tables a chapter from the "New London Dispensatory" of Wm. Salmon, M. D., published in London in 1676, which will arrest the attention of every reader, first as a literary curiosity, and then as illustrating the progress of pharmacy in the last two hundred years. The preface of this old London physician shows that he was beset by carping critics in his day, and that he knew well how to reply to his assailants. "There are," he says, "some half-witted Animals abroad who (envying our reputation) would persuade the world that our works are only collections out of others, and that we have done nothing but what was done before." To which he replies that such "idle drones are beholden to him for his labor and pains herein, and ought rather to give him thanks for his care and trouble than to carp against him for that which their crazy pates can neither mend nor imitate. All the hurt we have done them," he continues in his sarcastic way, "is to gather much into little, and to save them the charge of buying and the labor of reading (if they have learning enough to read) the many and vast volumes of the ancients; thereby giving them more time to spend at their cups, and greater leisure to fortify their empty noddles against the prevailing forces of sloth and ignorance."

Mr. Sweringen has "gathered much into little" in his Pharmaceutical Lexicon; and though he may hardly hope to be addressed in such lines of panegyric as were written on the book of the learned Salmon,

"An ego splendenti præberem lumina soli?
Aut pelago guttas addere coner amens?"

we can promise him that the critics will never be angry with him for bringing treasures from so many sources, but will heartily applaud him for the care and trouble which has resulted in a volume so truly valuable.

A Manual of Medical Jurisprudence. By ALFRED SWAINE TAYLOR, M. D., F. R. S., Fellow of the Royal College of Physicians and Professor of Medical Jurisprudence in Guy's Hospital. Seventh American edition. Revised by JOHN J. REESE, M. D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. Philadelphia: H. C. Lea. 1873.

Nothing could testify more satisfactorily to the popularity of this work than the fact that in a few years it has passed in this country through six editions, while eight editions of it have been issued in England. As now presented to the public it has claims to regard over all the former editions in having been much extended, and so brought fully up to the present time, by its American editor. From its first appearance it has taken the highest rank among the authorities on medical jurisprudence; nor is it likely to be superseded by any other treatise on the subject so long as it continues to be revised with the care which its author has bestowed upon its successive editions. In the preface to his last edition he states that the subjects have been reduced in extent by the omission of histories of cases, which he has incorporated in a work on the principles and practice of medical jurisprudence. While this omission undoubtedly detracts somewhat from the dramatic interest of the work, it was necessary to keep the volume within convenient limits, and all the facts are retained which the student or the practitioner will need for his guidance in questions of legal medicine.

The volume as now published opens very appropriately with a chapter on the practice of medical jurisprudence, medical and medico-legal duties, the inspection of bodies in death from wounds or poisoning, the use of notes, medico-legal reports, and dying declarations; which is followed by one on coroner's inquests, examination in courts, duties of medical witnesses, and rules for the delivery of evidence—subjects of the greatest moment to every physician who is liable at any moment to have his knowledge about such matters subjected to the severest test. A want of preparation for these trials endangers the character of our profession. Physicians go into court as witnesses without due investigation, and as a necessary result contradict one another, or are made by ingenious attorneys to contradict themselves. Feuds are thus engendered among the members of the profession, and the force of medical evidence is neutralized by its contrariety.

The evidence afforded by the popularity of this book of the growing taste for medical jurisprudence must therefore be hailed with pleasure by every friend of the profession. It indicates that the study of it is becoming the rule instead of the exception, as was the case a few years ago. A work on medical jurisprudence is coming to be regarded as necessary to every medical library, and there can hardly be a doubt that this conviction will deepen with the advancement of medical science. Dr. Taylor has presented us with a work which affords all the information that a medical witness is likely to require, and imparts it in a manner so pleasing that its study is a recreation rather than a task.

A Hand-book for the Physiological Laboratory. By E. KLEIN, M. D., etc.; J. BURDON-SANDERSON, M. D., F. R. S., etc.; MICHAEL FOSTER, A. M., M. D., F. R. S., etc.; and T. LANDER BRUNTON, M. D., D. Sc., etc. Edited by J. BURDON-SANDERSON. In two volumes, with one hundred and twenty-three plates. Philadelphia: Lindsay & Blakiston. 1873.

This work has been prepared for students entering upon physiological work, of whom the number is yet comparatively small in America, and for that reason it is not likely to be extensively circulated in our country. Nevertheless we can boast a corps of investigators to whom it will prove a most acceptable guide. It is a book for the laboratory, and will interest physicians only so far as it details the experiments upon which physiological science is based. Divided out among the several authors, the subjects are presented with a fullness that could hardly have been attained by a single author. Histology is treated of by Dr. Klein, who begins with the blood-corpuscles, and treats successively of the various tissues of the body — connective, muscular, nervous, and vascular—and of the organs of digestion and respiration. Dr. Burdon-Sanderson takes up the blood, the circulation, respiration, and animal heat. The functions of muscle and nerve are discussed by Dr. Foster, and Dr. Brunton gives an account of digestion and secretion.

To the teacher of physiology it appears to us that these volumes must be of very great value, indicating as they do the methods by which the facts of the science may be illustrated. Every teacher has experienced how much more attractive the truths of any science may be rendered by addressing them to the eye, where that is practicable, as well as to the ear.

Clinic of the Month.

ANTISEPTICS IN SURGERY.—Prof. Wood, of King's College, in his recent address on surgery before the British Medical Association, remarked that he had the highest respect for Lister's system of treating wounds. On his theory of germs it was consistent and simple enough; but it was as a practical method that it must be estimated, and it was with that view that he had put it as far as possible to the test. He began it when the hospital was in a good hygienic condition, and for that time the cases did admirably. He had some cases quite equal to any described by Prof. Lister. He also tried the applicaton of dry lint, and in many, especially in breast cases, the results were also perfect. He also tried the application of the chloride-of-zinc solution in the manner originated by Mr. De Morgan, and very good results ensued. After about six months a very unfavorable change came into the hospital. Erysipelas and pyæmia began to show themselves. The wounds began to suppurate more, primary healing was less common, and the erysipelatous blush appeared in cases treated in all ways, and almost as impartially on his own antiseptic side of the hospital as on his colleague Sir Wm. Fergusson's non-antiseptic side. But there was little or no putrefaction in any of his cases, as evidenced by the odor, which his eminent colleague, however, attributed to the carbolic-acid smell overpowering all others.

In some cases of psoas abscess treated by Lister's method he had had marked success so long as the hospital remained healthy; but when erysipelas and pyæmia appeared he had others in which the pus in the abscess became putrid and offensive after the first evacuation under the spray and with all the precautions, and he was obliged to make free openings and introduce drainage tubes through which the abscess could be washed out with antiseptic. Such cases showed the danger of departing from the old rule of providing a free exit for all purulent and offensive discharges, for the want of which the exclusion of air was not a sufficient compensation.

He then alluded to Mr. Callender's paper, and the advantages of cotton-wool, which was preferred to any other dressing, he said, by Mr. Christopher Heath. He spoke of Prof. Humphrey's and Dr. Weil's views. He said that after frequent trials he considered that the readiest, lightest, coolest, and most generally useful application of the antiseptic method was a plan comprising the free use of Chassaignac's drainage tubes passing from the surface of the wound, or from its interior if deep and sinuous, and with their outer extremities imbedded in cotton-wool or oakum well permeated with McDougall's or Calvert's powder, or other disinfectant or absorbant of discharges, the surface of the wound washed over after bleeding had ceased with a mixture of solutions of chloride of zinc or sulpho-carbolate of zinc; the same solution to saturate the lint, applied in the same way as in water-dressing, and enveloped in thin gutta-percha tissue, the whole supported by strapping and a light bandage. An outer envelope of cotton-wool or oakum completed a method from which he had obtained as good results as any, and which he had found it less difficult to insure being carried out.

He agreed with Mr. Lund's view. Erysipelas did not seem to be much influenced by antiseptic measures. It was a constitutional disease. Although usually showing itself first at the wounded part, it did not invariably.

In four cases of pyæmic affection the treatment to which he had subjected his patients was attended with success. Besides persevering in the antiseptic local treatment, and giving free access of fresh air, he said he had surrounded his patients with a highly antiseptic atmosphere by placing muslin bags of McDougall's powder around and within the bed, and in abundance about the wound, so that he should both breathe the carbolic and sulphurous vapor and imbibe it through the skin. If the stomach were not feeble or irritable, he also gave three to six-grain doses of sulpho-carbolate of iron with the view of testing Dr. Sansom's practice. He took care not to give the drug soon after nourishment was taken, so as not to interfere with the first stage of digestion, and discontinued it at once if the appetite fell off or there was pain after taking it. Three of the cases showed in a week or ten days the peculiar slate-colored or olive-green color of the urine. These four cases completely recovered.

Mr. Wood said he believed cases of recovery frequently occurred under other methods or no methods; and that as much depended on the age and reparative power of the patient, the amount of blood-poison formed or absorbed, and the general conditions of the atmosphere as upon any system of treatment whatever. He attached much importance to free drainage in dressing wounds. When these were made by the surgeon a good deal might be done by a judicious choice of the direction of the incision in resections, etc., position of flaps, etc., in amputations. Mr. Hutchinson's plan of making a puncture in the popliteal space in excision of the knee-joint illustrated his meaning. The wound should be made to slope toward that part which was most dependent when the patient was laid in bed. For that reason the circular operation in amputations of the thigh was objectionable. Very good drainage was accomplished in the late Mr. Teale's plan of a single square anterior flap. He preferred in the thigh, however, an oblique double flap, with the outer end of the incision placed lower than the inner, and the front flap placed somewhat outside the limb, and longer than the hinder. He was convinced that this gave the most complete drainage, prevented the bone protruding, and made a shapely and serviceable stump, with the cicatrix placed well behind the point of pressure.

Another important point in favoring the escape of discharges from the interior of a wound lay in the manner of securing the arteries. He believed, with Sir W. Fergusson, that so long as entire union was wanting, ligature threads might have the advantage of keeping open channels for the escape of discharges from the close neighborhood of the tied arteries, the accompanying veins of which were frequently the source of effusions of blood after the wound was dressed, and these would afterward clot and putrefy. He usually well steeped the ligature threads in carbolized oil, saturated so as to be unable to absorb discharges, and utilized so as to spread around an antiseptic influence. There was one point in the section of flaps which he thought might have influence sometimes on the introduction of pus or septic matter into the cut veins. When these were cut obliquely with the face of the flap, they were opened in a large conic section in the shape of a pen, and left, when placed on the underlying flap; in an attitude well adapted for receiving and conducting into their interior pus and putrid discharges, which gravitated from the surrounding hollow and often funnel-shaped sides. To obviate this he invariably after a flap operation cut off the larger veins transversely.

Mr. Wood next touched upon the radical cure of rupture. He said he had long thought we might prevent a return of the protrusion after the operation for the relief of strangulation. He believed that in a healthy subject the peritoneum might be dealt with as freely and as safely as any tissue; and that the chances of bad results from peritonitis would depend upon the injury sustained by the bowel in peritonitis rather than upon any way of dealing with the peritoneal sac and parietes after the strangulation had been relieved, provided due drainage were secured. When the bowel and omentum were congested only, and most likely to recover when placed in their natural cavity, especially in young and healthy subjects, he concluded that the attempt would be justified and probably be successful. The advantage of preventing a lifelong trouble was obvious. He then narratad three cases.

Mr. Wood said cases of ectopia vesicæ and epispadias possessed an interest for surgeons who had a tendency to plastic efforts. During the last ten years that his attention has been directed to this deformity he had met with forty or fifty cases. More had been recorded by Prof. T. Holmes, who first practiced successfully in this country, in 1863, the plan followed by Pancoast and Ayres in America in 1858. It had apparently been suggested by M. Richard's unsuccessful application of Nélaton's principle of laying a flap upon the parts to be covered, with the skin surface downward, and covering it with another. Other cases had been operated on in various ways by Messrs. Simon, Lloyd, Sydney Jones, and Thos. Smith, with, he believed, little success. He had himself operated upon sixteen cases.

For epispadias he had operated by Nélaton's method twice with favorable results. For hypospadias, in which the urethra was deficient below as far as the scrotum, he had operated three times upon a plan somewhat similar; viz., a reversed flap upon the side of the opening, with another from the scrotum superimposed upon it. A similar plan, combined with internal section and dilatation of the strictured urethra, he had found to succeed admirably and completely in two cases of penile urinary fistula communicating with the urethra in front of and close to the scrotum, accompanied with a hard cartilaginous stricture of the urethra.

Among the novelties of the year was the plan of M. Demarquay of passing a long flexible hollow bougie through a perineal urinary fistula previously enlarged by the bistoury, and then one end forward through the stricture and out at the meatus, and the other end backward into the bladder. Mr. Furneaux Jordan's plan of treating obstinate impassable strictures by attacking them in the rear, through an opening from the rectum into the dilated urethra behind the stricture, was a valuable contribution to surgery.

Much had been done in other kinds of plastic surgery of late years. Since his own successful case of transplantation of skin from the abdomen to the arm for the relief of a frightful deformity of the wrist (published in the Medico-Chirurgical Transactions for 1863, vol. xlvi) he had had two more successful cases. A similar operation had been also successfully performed by Mr. Thos. Smith in St. Bartholomew's Hospital; and his colleague, Mr. Hy. Smith, had lately had a very good case of operation upon the same plan for the relief of an extreme contraction of the elbow. In rhinoplasty, in which so much good work had been done by Mr. Hamilton, of Dublin, he had had some good cases of restoration of the nose from the cheeks and upper lip, some of which were found among the photographs laid before the meeting. The last case he had undertaken was about the most difficult one he had ever had to deal with, in the width of the chasm and the extensive loss of substance. The nasal bones, the vomer, ascending process, and a considerable part of the alveolus of the superior maxillary, and the whole of the ethmoid except the cribriform plate, had necrosed away as the result of scrofulous lupus. A great prominence of the frontal sinus also constituted a source of difficulty. To afford a basis for the new nose to be turned down from the forehead he had resorted to the plan frequently followed successfully by Sir Wm. Fergusson, of dissecting off and bringing toward the median line both cheeks. To secure the union of these, and to afford a prominence to the point of the nose, he had followed a plan which he had before employed in bad cases with satisfactory results. At the same operation he turned up the middle third of the upper lip and split it from its lower edge, turning over the borders so as to afford a bridge of support and an extended raw surface for union with the apposed cheeks. This was rendered necessary to enable the cheeks to meet in the median line, as well as to insure their union to each other. When this had entirely healed, by a second operation he dissected up the mucous membrane from the bridge made of lip-tissue, and reflected it over the gap still left between the eyes, so as to form another bridge of support for the root of the new nose, and to prevent it from sinking into the gap so as to become too much depressed. He then turned down the new nose from the forehead, after the Indian method, fitting it on to the raw surface, which gave it admirable support, and kept up the point of the new nose in a manner which one does not commonly see after this operation.

He had practiced with advantage M. Reverdin's method in many rhinoplastic cases to eke out any deficiencies of skin in corners where it was desirable to prevent puckering from contraction, or to substitute skin-tissue for mucous membrane exposed by reversal of the upper-lip structure, which was apt to show its parentage unless subjected to more friction than was agreeable or possible on a newly-formed nose.

Mr. Wood said he had barely time, among the recent innovations of modern surgery, to notice one which "*l'audace*" of the French school is applying in a manner which those who have reached the rest-and-be-thankful stage in surgery might call daring, if not rash. He alluded to the use of M. Dieulafoy's *aspirateur* to relieve distension by puncture of the bladder in cases of retention of urine, and of the intestine in abdominal obstruction, and in joints affected with hydrops articuli, and even to evacuate the fluid contents in strangulated hernia. In the first-named of these conditions it was no doubt valuable as an adjunct to other remedies. Demarquay had not found it of much practical use in intestinal obstruction, because of the rapid re-formation of flatus, which corresponded to his own experience of puncture in desperate cases, without the aspirator. Mr. Wood said he had used it in the puncture of joints and the cure of hydatids, though not frequently enough to pronounce upon its capabilities; but he had not as yet arrived at the measure of audacity to use it in strangulated hernia, as it scarcely agreed with his own impression as to the importance of avoiding any injury to the bowel in dealing with strangulated or other herniæ.

A NEW METHOD OF PRODUCING LOCAL ANÆSTHESIA.—Dr. Horvath, of Kieff, has lately proposed (The Doctor) a new method of producing local anæsthesia. If the hand be immersed for a short time in ice-water, severe pain is caused. But in experiments made in reducing the temperature of frogs by means of cold alcohol, Dr. Horvath found that no such pain was produced when the hand was immersed in cold alcohol, not even when the temperature of the alcohol was as low as 5° C. Glycerine was found to possess a similar property. Ether caused pain, and quicksilver more acute pain still, causing the speedy withdrawal of the finger when plunged into this liquid at a temperature of 3°. It was next ascertained that when the finger was held for quite a long time in alcohol having a temperature of 5° C. no pain was experienced. Moreover, although the faintest touch was distinctly perceived in his finger, no pain was experienced from sharp pricks. This seemed to show that the application of cold alcohol has the effect of depriving the part of the special sensibility to pain, without, however, impairing the delicacy of the general tactile sensation, which, as is well known, resides in the superficial integument. This apparent possibility of the artificial separation of these two nervous functions—viz., the tactile sensation and the sensation of pain, and the temporary suspension of the latter—seemed important in a physiological point of view, and also of no small practical utility in allaying certain forms of local pain, more especially that caused by burns and surgical operations. Dr. Horvath had an opportunity of testing the value of this application to burns on his own person, as well as upon others; and not only was all pain instantly allayed directly the part was immersed in alcohol, but it was found that the wound very speedily began to assume a more healthy appearance, the surrounding redness rapidly failing.

TREATMENT OF BRONCHOCELE.—In an interesting letter written from London, by Dr. Beverly Robinson, for the New York Medical Journal, it is stated that bronchoceles of a hard and fibrous nature are now uniformly treated at the Hospital for Diseases of the Throat by injections with the compound tincture of iodine, B. P. The injections are made on an average, at the beginning of the treatment, once a week. At a later period, and when the tumor has notably diminished in volume, the injections are employed less frequently. The quantity of the liquid used on each occasion is thirty minims. This is injected directly into the tissue of the gland. A syringe very similar to the one familiarly known as that of Pravaz is adopted. Great care is to be exercised in washing it out immediately after the operation with rectified spirits, in order to palliate the hurtful action of the iodine on the joints of the syringe. During a brief period after the injection some few patients complain of severe pain or smarting in the goiter and its immediate neighborhood, but this is of a very temporary nature. Swelling of the tumor takes place very shortly after the injection. In twelve or fourteen hours diminution begins, however, and the tumor gradually lessens in density and bulk. At the expiration of a few weeks to a few months but a small portion of the original formidable tumefaction remains. Of the divers treatments we have seen employed in this form of bronchocele this shows itself the most successful.

The softer and, as it were, more generalized form of bronchocele is treated successfully by ordinary counter-irritation with the liquor epispasticus, B. P. The cystic form of bronchocele is treated by tapping the cyst and drawing off the serous or, as is more frequently the case, thick, coffee-colored liquid, and then by the injection of one or more drachms of a solution of perchloride of iron, one hundred and twenty grains to an ounce of water. The object of the injection of iron is to coagulate the blood which immediately follows the escape of the cystic fluid. This coagulated blood after a few days becomes purulent, and the cyst is converted into a chronic abscess. Sometimes more than one injection of the solution is necessary previous to the encysted liquid becoming purulent. The duration of this treatment, like that of bronchocele of a fibrous nature, is of course variable, depending upon the size of the cyst. Its success, however, appears certain, and we can bear witness to having seen many admirable cures result from its adoption. In a case in which the bronchocele had reached an enormous size—the patient's chin being pushed up by it to the farthest extent—after the cyst had been destroyed by the plan mentioned above, it was found necessary to use the injection of iodine into the walls, as they in themselves formed a considerable tumor. The result was a complete cure.

In *enlarged tonsils* excision is almost the exclusive treatment used. The tonsillitome is of simple construction, without the fork often seen made with them; and the operation is materially facilitated by external pressure, made by an assistant, below and behind the angle of the jaw. When the flow of blood becomes a source of anxiety, the hemorrhage may be immediately arrested by the patient swallowing small quantities, at short intervals, of a saturated solution of tannin in water. In comparatively acute cases we have seen the ablation of the tonsils lead to very excellent results. In more chronic ones, especially in children, persistent attacks of nightmare may often be stopped and the general nutrition very much improved by the same operation.

In *functional aphonia* we can testify to the astonishing effect of the electric current. In patients who have been completely aphonic for a number of years we have seen the voice almost magically restored in a single sitting.

ON THE TREATMENT OF FIBROID TUMORS OF THE UTERUS. Dr. Alfred Meadows, in a series of most interesting lectures on fibroid tumors of the uterus (London Lancet), says, in speaking of the therapeutics of the subject:

"Let us now see what art can do and what it can not; for it is quite as useful to know what to avoid on the ground of incompetence as it is to know what to undertake with a fair hope of success. There is, in truth, no folly greater than to attempt the impossible, and no worse treatment of conscience and of character than the habitual practice of unreality—the pretending to do what in our heart of hearts we know we can not do. I fear there is not a little of this deception habitually fostered by the useless administration of drugs for a purpose which we must know to be utterly impossible of attainment. That there is ample scope for the employment of drugs in the treatment of these fibroid tumors I am well assured by abundant experience; but I am none the less firmly convinced that to persuade women for months and years to swallow gallons of medicine, mostly of a depressing and debilitating kind, and to irritate themselves with so-called absorbent ointments and embrocations, in the vain hope that we can thereby bring about the absorption and removal of a hard fibroid tumor the size of an adult head, or even of a walnut, in an organ deeply seated, and having no anatomical or physiological relation to the part we irritate, is not only unscientific, but it is unreal and dishonest. I would only repeat what I said on this subject several years ago—viz., that if we bear in mind the histological elements of which these tumors are composed, and the anatomical relations of the tumor itself to the part where the inunction is applied, we must at once recognize the absurdity of the treatment, and wonder how it could ever have been proposed, though that is far less difficult to understand than that in our day, with all our advance in pathology and therapeutics, it should still be practiced as diligently as if success had been a uniform result. I have seen this treatment perseveringly adopted for many years; but I can not say that I have ever traced the smallest benefit to it, and I have certainly never seen a tumor appreciably reduced by it. I do not believe that the current practice of giving preparations of iodine, bromine, and chlorine, in combination with iron, mercury, potassium, or calcium, has any thing more than custom in its favor, or can boast of such success as to warrant its continuance. If these drugs had the virtue which is imputed to them, we should expect to see it exercised, not occasionally and with extreme rarity, but, if not very frequently, at least in a fair proportion of cases; for it is unreasonable to suppose that a remedy which must act, if at all, in a definite and intelligible manner, should exercise its influence only once in hundreds or thousands of cases.

"I have used perseveringly the chlorides, iodides, and bromides of mercury, even to the maintenance of slight salivation, kept up for some time; but I must frankly own that, beyond the mischief to the patient's constitutional powers which they are well capable of effecting, I have not observed any result, and most certainly I have never seen the very smallest diminution in the size of the growth for whose removal it was given. In iodide of potassium and iodide of iron I have just as little belief for the purpose in question. Their value in certain glandular enlargements which are chiefly or entirely of an inflammatory kind, and in the inflammatory syphilitic affections, is undoubted; but there is a very wide difference between all these and the diseases we are considering; and while I have seen abundant evidence of the one, the other has never come within my observation, albeit I have been only too ready to see it."

Dr. M. has even less faith in the chloride of calcium, a drug whose reputation, he asserts, is most undeserved. He continues:

"While however, as I have said, I believe that drugs are utterly inert in promoting the removal of uterine fibroids, I nevertheless fully recognize their value in alleviating or removing the distressing symptoms which sometimes attend these growths, and here there is a very legitimate exercise for them. Sometimes these tumors, either in connection with or apart from the uterus, become inflamed, and they may, as I have shown you, go on to suppuration. They swell up, soften, as if from a kind of œdematous infiltration, and become more than ordinarily painful to touch. Quite recently I had a case of this sort under my care. The patient had been treated mechanically for anteflexion; that is to say, she had worn a pessary for the purpose of curing this supposed displacement. No relief, however, followed; on the contrary, the pain increased greatly. When I saw her the swelling in front of the cervix was excessively sensitive, and had a boggy, œdematous kind of feel. My suspicion that it was not anteflexion was first aroused by observing that the swelling was not entirely in front, but a little to the right of the cervix; and on passing the sound, which I did very gently, I found that it went in the normal direction and left the tumor unaltered. The diagnosis being therefore clear, it was easy to understand that the severe pain and tenderness were due to the irritation and inflammation set up by the pressure of the pessary on the tumor. I at once ordered leeches, warm injections, and effervescing salines, followed afterward by anodyne vaginal suppositories. The result was most satisfactory as regards the relief of pain and inflammation; and, what was especially noteworthy, the tumor rapidly and considerably decreased in size, no doubt by the removal of all inflammatory products, for the tumor at last became hard and did not diminish beyond a certain point.

"The treatment which I adopted in this case will be found, I think, generally successful in all cases where there is reason to suppose that inflammation of the tumor exists. This is not at all an uncommon occurrence, and the suffering is often very great. After the more acute symptoms have subsided and the tenderness is diminished we shall find great benefit from the local application of iodine in promoting the absorption of the effused inflammatory products. This should be applied directly to the part itself, and we may do so either by freely painting the cervix with the linimentum iodi every other day, or by applying pledgets of iodized cotton-wool after the manner suggested originally by Dr. Greenhalgh. Both these methods are very effective for the purpose in question; but, on the whole, I give the preference to the former, where the use of the speculum is not objected to, on the ground partly that patients generally prefer it to having a plug of cotton-wool left in the vagina for twenty-four hours, and also because not unfrequently the vagina is irritated a good deal by contact with the iodized plug, which necessarily affects a much larger surface than when the paint is applied over the limited space of the cervix.

"In regard to this local employment of iodine, I may say that I have on many occasions resorted to it for the purpose of securing, if possible, some absorption of the fibroid tumor itself; and although I have absolutely no belief whatever in the value of iodine when applied with this view over the skin of the abdomen, and not very much faith in its efficacy as a local application directly to the uterus itself, yet in a few cases I certainly have observed some diminution in the size of the tumor, which appeared to me to be due to the treatment adopted. I think too that the efficacy of this method is greatly enhanced by the occasional application of a few leeches to the uterus itself. It has appeared to me that this treatment is more successful in some kinds of cases than others; and, in general, I should say that the smaller the tumor the softer it is, and the nearer to the cervix the more likely we are to be successful. I have noticed also that the subperitoneal varieties are far less amenable to this method than the interstitial; and of course it is only in these two varieties that we should think of adopting such treatment, the submucous and polypoid forms being reserved for the surgical treatment, which I shall presently describe. It may be added that this iodine and depleting treatment is of no avail unless it be perseveringly continued for many months. If therefore the patient is not prepared to submit to this, it is useless beginning it. I seldom give any medicines internally, as I have no belief in them. They often do more harm than good to the general health, and it is quite enough to be obliged to give some drugs for the purpose of combating the more urgent or distressing symptoms."

Of palliative treatment proper, which will be directed in the main to the relief of one or other or all of the three leading symptoms—viz., menorrhagia, irregular discharge of mucus or of blood, or pain, the first of which is the most common and probably the most trying and troublesome symptom to treat—he says:

"Of course I need not say that astringents will under such circumstances be called for, and among the many that have at different times enjoyed popularity it is difficult to select one which shall prove most effectual. Indeed I do not hesitate to declare that there is no single remedy that I know of which can be relied upon with any thing like certainty to check the hemorrhage or arrest the menstrual flow in cases of this sort. I have tried in turn most if not all the so-called hemostatics, and I can not say of any one of them that it has been uniformly successful, or that it has not at times most signally failed. Gallic acid in one case, astringent chalybeates in another—and of the latter I know of none that is so effective as the ethereal peracetate of iron in half-drachm doses; acetate of lead in the third, taking care always in giving the latter to do so in solution with the dilute acetic acid; ergot of rye in a fourth, in half-drachm doses, giving this in the recent powder in preference to any other form; these are, according to my experience, among the most efficient remedies of this class. But there is one that I have used during the last twelvemonth which certainly seems to me by far the most effective remedy of the kind that we possess; I mean the watery extract or liquor of the common periwinkle—the extractum vincæ major liquidum, as it is called. This, taken in drachm doses, properly diluted, every four hours, I have seldom known to fail. It is certainly by far the most efficient remedy that I know of for the purpose in question. Why one remedy answers at one time or in one case better than another I am quite unable to say. Constitutional or local peculiarity may have to do with it; but in any case I can lay down no rule for your guidance, for the whole thing seems to be purely empirical. Of those agents which, while possessing no astringency, have nevertheless in some hands proved effective as hemostatics—such as digitalis, turpentine, Indian hemp, and mercury—I have no satisfactory opinion to offer, for the reason that they have all in my hands proved utter failures. Of course, where great anæmia exists, a chalybeate astringent would seem the most fitting; but I have on many occasions found it rather increase than diminish the bleeding. The same may be said also of ergot. Dr. McClintock speaks very highly of the hemostatic properties of mercury, confirming in this respect the experience of Dr. Tanner, who found it a most useful agent for this purpose. I must own that I have never seen such a result. If I were to place the medicines in the order in which I have found them of greatest value, I should assign them as follows: the liquid extract of the common garden periwinkle, the ethereal peracetate of iron, ergot in the form presently to be described, gallic and sulphuric acids with the compound infusion of roses, the acetate of lead with dilute acetic acid, and in a few rare cases of the congestive kind the local abstraction of blood by means of leeches to the cervix; these have all, in turns, proved efficient in my hands. As a general rule, I have observed that when hemorrhage does occur, which is very seldom, in cases of subperitoneal fibroids, it is more easily arrested than in either of the other varieties; and for such the periwinkle or the chloride of calcium, given perseveringly for months, has been the most successful. In interstitial fibroids the bleeding is more difficult to control, and ergot of rye or borax has proved the most efficient agent in such cases. In the submucous, and still more in the polypoidal forms, the difficulty of arresting hemorrhage is greater than in either of the others. Here the vinca major and the more common astringents — such as gallic acid, sulphuric acid, iron alum, or the peracetate of iron — have appeared to me to answer best.

"There is one other remedy which I have tried quite recently in three cases, and the result in one of these was very marked; I allude to the subcutaneous injection of ergotine. The solution which I employed contained ten grains of ergotine to a drachm, and from five to twenty minims were injected each day. In one case severe cellular inflammation followed in the site of the puncture, so that the treatment had to be discontinued; in another it excited so much pain and distress about the præcordia that I was obliged to desist, and in neither did any good result; while in a third the remedy was continued daily for ten days, and not only did it produce a decidedly beneficial result in regard to the next menstrual period, but the hemorrhage was restrained for two months afterward, when the case passed from my observation. I believe that we have in this agent a powerful hemostatic remedy, for I am informed that very good results have followed its practice in other hands.

"In addition to the above, the local application of astringents will often prove most successful; and these we may apply either in the shape of vaginal suppositories of tannin, or the glycerine of tannin, or matico or alum, or we may inject the uterus with the perchloride of iron, though I very much prefer the use of the anhydrous zinc points as suggested by Dr. Braxton Hicks. In the more severe cases, where a fatal issue seems almost to threaten, it will be necessary to resort to the use of the tampon."

CHLORIDE OF POTASSIUM IN EPILEPSY.—Dr. Lander uses chloride of potassium instead of bromide of potassium in epilepsy. He mentions the following advantages in the employment of the substance: "It is more active, is but one sixth of the cost, and has not the secondary effects of the bromide. He begins with small doses, but has been able to continue the use of the substance for months without any inconvenience in daily doses of from one drachm to a drachm and a half. According to Dr. Lander, bromide of potassium is transformed into the chloride in the stomach. This is therefore an additional reason for prescribing it at once in this latter form."—(Scalpel, Belgium.)

TEMPERATURE IN PLEURISY.—M. Bouilly, who has specially investigated the above question, says: "1. There exists a *pleuritic fever*, the mean duration of which is from twenty-eight to thirty days, whether the effusion is abundant or moderate. 2. Thoracentesis does not notably diminish the duration of the febrile condition shown by the thermometer, though it considerably diminishes its intensity. 3. In serous pleurisy the thermometer does not afford the valuable results which it does in purulent pleurisy." (Lancet.)

Notes and Queries.

Removal of Foreign Body from the Larynx.—Richard Brandeis, M. D., of this city, recently effected the above under the following interesting circumstances:

"Mrs. K., aged thirty-four years, of a robust and healthy appearance, came to me on the 15th of October with the following history. She stated that during the last four months she has been troubled with a violent hacking cough, which only disappeared after the expectoration of large quantities of muco-purulent phlegm; has had constant pain and irritation of the larynx, occasionally causing almost complete aphonia. She has had occasional pains in her chest, mainly during the first two weeks of her indisposition, which induced her to consult a homeopath in this city, who told her that she was suffering from chronic laryngitis and tuberculous phthisis. Ignoring the teachings of his master, the homeopath treated the patient in genuine allopathic style; giving large doses of cod-liver oil internally, making local applications of nitrate of silver to the entire pharyngeal cavity, and ordering repeated inunctions of croton-oil on the chest. As this treatment did not improve but appeared to aggravate the trouble, even though faithfully following it for four long months, Mrs. K. called upon me and gave me her history as above detailed. On examination I found that the larynx was sensitive to the slightest external touch, the slightest pressure on the pomum adami giving rise to cough and marked dyspnœa. The lung after careful examination was found healthy. The pharynx was found to be excessively engorged and very irritable, the slightest touch giving rise to vomiturition. On inspection with the laryngoscope the epiglottis was found very much inflamed and œdematous, moving but slightly on phonation, and presenting the same appearance as noticed in the first stage of *œdema glottidis*—both arytenoid cartilages, as well as the aryepiglottic folds, inflamed and enlarged, and the true vocal chords so much engorged with blood that they could hardly be distinguished from the false bands.

"The patient was very restless, and only after repeated trials did I notice a peculiar appearance in the left ventriculus morgagni; *i. e.*, a pearly-white band resembling a diphtheritic patch or a syphilitic cicatrix. Although my suspicions were somewhat aroused by this, the patient denied emphatically ever having suffered from either of the diseases just mentioned. I urged Mrs. K. to cough, and on so doing she expectorated a considerable mass. I again examined the larynx, and to my surprise saw the end of a piece of sewing-thread suspended in the rima-glottidis. Knowing this to be the *corpus delicti*, I dipped my laryngeal brush into some mucilage, introduced it into the larynx, and succeeded in withdrawing a piece of thread about five lines in length. The patient immediately experienced a sense of relief, and told me that she was in the habit when sewing of biting off a piece of thread, chewing and occasionally swallowing it. The bit of thread removed probably first lodged in the right pyriform sinus, worked its way down to the ventricle after passing over the aryepiglottic ligament, and thus gave rise to the distressing symptoms. I made several applications of tannic acid, and to-day (three days after the first visit) discharged the patient entirely relieved."

REGISTRATION.—Dr. Foss, who is making the most strenuous efforts in behalf of registration in our state, informs us that he has received petitions from about twenty counties in Kentucky, and only requires the co-operation of a few more physicians to secure such a presentation of the case to the next legislature as will insure the passage of a registration law. Dr. Foss has devoted himself to this work with a zeal and intelligence which is worthy of all praise, and we do hope that his brethren in all the counties yet delinquent will imitate his example. We would lend all the influence we can exert with our professional brethren in Kentucky to the disinterested exertions of Dr. Foss.

YELLOW FEVER.—This fatal fever, as is known to all our readers, has been raging as an epidemic for six weeks past in Shreveport and Memphis, and has also prevailed with severity in some of the towns of Texas. At Shreveport it has been announced that more than fifty per cent. of the earlier cases proved fatal. From the 14th of September, when it broke out in Memphis, to the 25th of October, it is reported that more than a thousand persons had died of the fever in that city. The present is the third irruption of yellow fever in Memphis. It appeared there the first time in 1855, when by common consent it was referred to New Orleans, from which place it was believed to have been imported by the steamer Harry Hill. It broke out again, in 1866, in the wake of cholera. This epidemic has also come in the wake of cholera, and at a season when New Orleans was comparatively healthy, having probably originated in Memphis.

At first it was prevalent only in certain localities, and chiefly among the poor Irish population; but gradually it has spread over the city until every quarter has furnished victims, among whom are numbered several physicians. It was hoped that the frosts which occurred about the 10th of the month would check the pestilence, but they were too slight to produce any such effect. Doubtless the lower temperature of the 21st and 22d will be followed by a favorable change.

The fact is one of great interest, that while refugees from the infected city have died of yellow fever in all the towns around Memphis, in no instance has the disease been propagated. Several deaths from the fever have occurred in Louisville in persons who had contracted it in Memphis, but without communicating it to their nurses.

We hope to be able at an early day to lay before our readers a history of this epidemic in Memphis.

DR. BALDWIN AND HAY ASTHMA.—Our valued friend, Dr. W. O. Baldwin, has been for many years a victim to hay asthma. We had the pleasure of a short visit from him a few days ago, in which he informed us that he had escaped his tormentor this season by resorting to the Hot Springs in Arkansas a short time in advance of the expected attack. The many friends of this distinguished and popular physician will be gratified to learn that he has enjoyed perfect health during all the period in which for so many years past he has been a sufferer from hay asthma, and the numerous subjects of this intractable affection will take encouragement from his case. If the Hot Springs should prove as efficacious in other cases there will be no bounds to their popularity.

SPECIALTIES.—Dr. Robert Barnes is not without humor, as witness the following from the London Lancet: "I have recently been honored by a visit from a lady of typical modern intelligence, who consulted me about a fibroid tumor of the uterus; and lest I should stray beyond my business, she was careful to tell me that Dr. Brown-Séquard had charge of her nervous system, that Dr. Williams attended to her lungs, that her abdominal organs were intrusted to Sir William Gull, that Mr. Spencer Wells looked after her rectum, and that Dr. Walshe had her heart. If some adventurous doctor should determine to start a new specialty, and open an institution for the treatment of diseases of the umbilicus—the only region which, as my colleague, Mr. Simon, says is unappropriated—I think I can promise him more than one patient."

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

FETAL PHYSICAL DIAGNOSIS.

WITH AN ANALYSIS OF THE PHYSICAL EXAMINATION OF ONE HUNDRED AND TWENTY-SIX CASES.

BY FRANK C. WILSON, M. D.,
Visiting Physician to the Louisville City Hospital.

Although M. Mayor, of Geneva, announced, in 1818, that the fetal heart could be heard through the abdominal walls, it attracted little attention until 1823, when M. de Kergaradic proclaimed that he could recognize two distinct sounds: one of them consisting of double pulsations, evidently fetal in origin; the other single in character, accompanied by a murmur, and synchronous with the maternal heart. Various writers, as Kennedy, Depaul, Naegele, jr., Cazeaux, Tyler Smith, and others, have from that time to this called attention to the importance of auscultation in the diagnosis of suspected cases of pregnancy, and some have even advanced so far as to give directions how to ascertain the presentation and position. Notwithstanding the number and character of those who have written upon the subject, it has not received from obstetricians that attention and study which its importance demands; and to-day the mass of the profession, even those doing a large obstetric practice, still neglect to avail themselves of that assistance which physical diagnosis affords.

Most of those who have written upon the subject have relied exclusively upon auscultation, which, though the most important, is not the only method of physical diagnosis applicable. Inspection, percussion, and palpation each furnish valuable information; and the examination, to be systematic, accurate, and thorough, should embrace all four methods. Each should be practiced in turn, and the information gained nicely weighed in the formation of the diagnosis. Some physicians object to this method of examination on the ground that private patients will not submit to it. I have never yet had one refuse when I had explained to her the necessity for it, and the information to be gained. It is really less indelicate to gently place the ear upon the abdomen than to make a vaginal examination. Instead of lowering the obstetrician in the estimation of his patient, it will tend rather to convince her that he thoroughly understands his business, and will inspire her with confidence.

The advantages to be gained by a physical examination of the fetus in utero are manifold. Not only will it disclose accurately the presentation and position of the child, but the sex and condition may also be determined. In cases of protracted labor the failure of the strength of the child may be detected, indicating the necessity for manual or instrumental assistance in order to save its life. The place of placental attachment may also be found; so that in case of adherent placenta no time is lost in searching for it, but the proper hand can be passed at once to the point so as to detach and remove it. Disease of the placenta may possibly be detected by some change in the placental murmur. Obstruction to the flow of blood in the funic arteries—either by the cord being twisted around the neck, tied into a knot, or compressed against the bony prominences of the mother — may be detected with a certain degree of accuracy. A knowledge of the presentation and position of the child before the labor has progressed may enable the physician, in cases of transverse and breech presentation, to change an unnatural into a natural labor, thus saving the woman much suffering, and possibly avoiding the sacrifice of life. Where the funic souffle heard at the neck of the child shows that the cord is twisted around the neck, it warns the obstetrician to be on the lookout for that complication.

Let us now study in detail the different methods of physical diagnosis, with the information to be gained by each.

The patient should be upon her back, the thighs being slightly flexed so as to relax the abdominal muscles, the abdomen being lightly covered, and the two sides disposed symmetrically. The difficulties of the examination will be greatly increased if the abdominal wall be very thick, the muscles tense, or the amount of amniotic liquor excessive.

I. By inspection can be noted the general contour and outline of the abdominal enlargement, whether it be the normal ovoid or broader than usual, as is the case in shoulder presentation. In cases of twins there will be seen a prominence on either side, separated by a median sulcus more or less deep. If the abdominal walls are thin, frequently the outlines of the child may be discovered, as the ball-like tumor of the head, the breech, the prominent limbs, the arched back. The movement of the limbs may also occasionally be seen on one side or the other.

II. By percussion we may mark out the limits of dullness vertically and transversely, thus showing whether the uterus is larger and broader than usual or of normal proportions. Sometimes the intestines getting in front of the uterus will give a tympanitic sound on light percussion, while forcible percussion will still yield the dull sound.

III. Palpation, though third in importance, and hence spoken of in this order, ought to be practiced after auscultation, because the manipulation disturbs the child, quickening its heart's action, so that the information gained by auscultation is not correct. If the abdominal walls are thin, the muscles entirely relaxed, and the abdomen not tender, very much can be learned by palpation. The different parts of the child—as the head, the breech, the knees, feet, and back—may be readily recognized and located, so that frequently by this method alone can be made a very correct diagnosis of the presentation and position. The child, if alive, will be felt to move, the movements of the limbs indicating the side toward which the face looks. In case of transverse presentation the head will be felt on one side and the breech on the opposite; the arched back, if looking forward, extending across the median line. If the abdomen looks forward instead of the arched back, the movements of the limbs will be felt on either side of the median line. In case of twins, a prominent tumor will be felt on either side of the median line, separated by a sulcus; and the two heads may be recognized, the one probably in the upper half of the uterus on one side, the other in the lower segment on the opposite side. The limbs may also be recognized, though sometimes they are so interlocked as not to be distinguished apart. Occasionally the children are placed one behind the other instead of side by side. This position is very rare, and would be recognized with extreme difficulty. The placenta, when attached anteriorly, may sometimes be recognized as a fleshy mass.

IV. Auscultation is by far the most important, and upon it must we chiefly rely, though, as previously shown, the other three methods furnish much information; yet we must weigh it as confirming or correcting the inferences drawn from auscultation. I prefer immediate auscultation to the use of the stethoscope, because it does not necessitate uncovering the surface; and the ear placed upon the abdomen, thinly covered by sheet or under-garment, will more correctly appreciate the character and quality of the sounds heard than if they are transmitted through the instrument. The point at which the sound is heard with greatest intensity may possibly be determined with greater accuracy by the use of the stethoscope, but a little practice will enable the obstetrician to decide that question by the ear with a sufficient degree of certainty for all practical purposes. The patient in the recumbent posture should have her head and shoulders slightly raised, the thighs also being slightly flexed so as to relax completely the abdominal muscles. The surface of the abdomen should be lightly covered by the sheet or an unstarched chemise; and the physician, if the bed be at all low, should sit rather than stand, so that his posture be as unconstrained as possible. There should be perfect quiet, and the woman should breathe in a natural and easy manner, with no excitement or flurry. The examination should embrace the whole abdominal surface, even far back upon the lumbar regions, the patient turning slightly toward the opposite side. The ear should make firm but moderate pressure, the head moving slightly in unison with the movements of the abdomen in respiration.

Among the sounds heard the educated ear will readily distinguish the following: 1. The gurgling produced in the intestines; 2. The utero-placental souffle; 3. The fetal heart-sounds; 4. The sounds produced by the movements of the fetus; 5. The funic souffle (occasionally heard); 6. The tearing sound, caused by the separation of the placenta; and 7. The crackling sounds caused by the gases formed in the decomposition of a dead fetus.

1. The gurgling sounds produced in the intestines are easily recognized as outside of the uterus. They are very irregular and unrhythmical, and are marked by a distinct tubular character.

2. The utero-placental souffle is a soft, blowing murmur,

synchronous with the maternal pulse, and heard most distinctly over the point of attachment of the placenta. It may be heard in the fourth month, and increases in intensity with the growth of the placenta as the gestation progresses. Much discussion has arisen as to the mode of production, the exact location, and the significance of this murmur. One party asserts that it is produced entirely outside of the uterus, by pressure upon the abdominal aorta or iliac arteries; the other party contending that it is caused within the uterus, either by the passage of blood from the arteries into the venous sinuses of the placenta or into the dilated capillaries in the walls of the uterus. Without entering at all into the merits of the discussion, it may be assumed that the production of the murmur has an intimate connection with the placental attachment. That there is a free communication of the arteries of the uterus with the placental sinuses is clearly shown by as careful an observer as Dalton, and with such free communication we would naturally expect the production of a murmur. The uterine vessels are certainly more highly developed opposite this point; and whether the murmur be produced by the passage of the blood from the vessels of the walls of the uterus into the placental sinuses or before it reaches the placenta is not material. The number of instances where opportunity has been afforded to verify the attachment of the placenta at the very point where the murmur had previously been heard are too numerous to be entirely ignored. M. Hohl, as quoted by Cazeaux, states that: "1. In twenty-one cases, in which he removed the placenta with the hand, he found it adhering where the souffle was first heard; 2. In fifteen cases, where it was inserted upon the orifice, the murmur was heard low down; 3. In ten others the autopsy revealed the after-birth where the souffle had been distinguished; 4. In eight cases of version the same fact was discovered directly; 5. In twelve cases of twin pregnancy one murmur only was heard, when but a single placenta was present, and two distinct ones when the after-births were separated; 6. Lastly, in a great number of cases the intensity of the sound appeared to be in direct relation with the bulk and extent of the placenta." In twelve cases out of ninety in which I had carefully located the placental murmur I have been able, because of the necessity for the removal of the after-birth, to verify its attachment at the point diagnosed. The sound frequently varies greatly in character in different cases, and even in the same case at different times. Occasionally it can not be heard at all, even by the most careful observer. The contraction of the uterus during labor modifies the murmur in a well-defined way, so that we may take advantage of this fact to distinguish the true from the spurious pains. With each genuine contraction of the uterus the placental sound at first becomes louder and more sonorous, but soon grows weaker, finally becoming inaudible, to return with the relaxation of the uterine walls. The false pains, on the other hand, are accompanied with little or no change in the placental murmur. When the murmur is heard after the removal of the placenta, it is usually because of the relaxation of the uterine walls incident to concealed hemorrhage, and when heard will serve a good purpose in warning the obstetrician of that grave complication.

3. The fetal heart-sounds consist of a series of double pulsations, varying in frequency from 110 to 170 per minute. The second sound is heard more distinctly than the first, though a satisfactory reason for the fact has never been advanced. The fetal heart can first be heard during the fourth month; after the sixth month it can always be heard by a careful observer, if the child is alive.

In auscultating the fetal heart-sounds notice, first, their fullness, strength, and rhythm; second, the point at which they are heard with greatest intensity; and third, the number of pulsations per minute.

(1) The fullness, strength, and regular rhythm of the heart-

sounds will indicate very clearly that the fetus is strong and in good condition, while a failing and unrhythmical action of the heart will show a corresponding weakness of the child, justifying active measures to save its life by hastening the termination of the labor. We may and should thus watch the effect of a long and tedious labor upon the strength of the child just as closely as upon that of the mother. The examination by simply auscultating the fetal heart should be made every time the physician goes to the bedside. No inconvenience is caused by it, and possibly a life may be saved.

(2) The accurate determination of the point at which the heart-sounds are heard most distinctly is very important, for upon that mainly rests the diagnosis of the presentation and position. The fetus, to accommodate itself to the cavity of the uterus, assumes an ovoid shape, the legs and thighs flexed upon the abdomen, and the arms folded upon the breast. If now, while in this shape, a plane be passed dividing it midway between the two extremities, the heart will be found in the cephalic end, and therefore the head will be below or above, according as the heart is heard in the lower or the upper half of the uterus. Through the arched back of the child, placed directly against the uterine walls, the sounds are transmitted to the ear more distinctly than through the breast; because the folded arms necessitate the intervention of a large quantity of amniotic fluid between the chest and the walls of the uterus, and through this fluid the sounds must be transmitted, passing from solid to liquid, then from liquid to solid, before reaching the ear with diminished intensity. Therefore the back looks toward the point where the heart-sounds are heard most distinctly, the occiput being to the left or the right, anterior or posterior, according as that is to the left or right of the median line, in front or far back toward the lumbar regions. Thus we have the data for clearly determining both the presentation and position.

When the fetal heart-sounds are heard distinctly at two distant points we should suspect twins; and should then notice, first, whether the sounds heard at the two points are synchronous; and second, whether one sound can be distinctly traced into the other. If the sounds are not synchronous, it must proceed from two hearts, and we have a case of twins. Sometimes the sounds are transmitted to a point somewhat distant, but in that case can always be traced from one point to the other. Also listen for two placental sounds, though frequently there is found only a single placenta in twin cases. By palpation the parts of the two children may be recognized.

(3) The rate of the pulsations of the fetal heart varies between 110 and 170, and seems to bear a very remarkable relation to the sex of the child. The count, to be reliable, should be made at several different intervals, and when the child is perfectly quiet; as the action of the fetal heart will be quickened by the movements of the child just as the adult heart is by active exercise. This examination should then be made before palpation and percussion, and if the woman be in labor, then during the intervals between the pains.

In June, 1870, Dr. James Cumming read before the Obstetrical Society of Edinburgh an interesting article upon the subject of the stethoscope as a means of diagnosing the sex in utero, giving the statistics of forty-one cases. Since the publication of that paper I have kept accurate notes of all the cases met with in hospital and private practice, diagnosing the sex in each, failing only in nine cases out of one hundred and nine. Dr. T. J. Hutton, in publishing the histories of seven cases met with in the Brooklyn City Hospital in which he correctly predicted the sex, deduces this rule: "When the fetal pulsations number 144 per minute it is a female; 124 per minute, male;" and adds "that a variation of six beats per minute from 124 upward or 144 downward will not endanger the diagnosis, provided auscultation be practiced in the ninth month of pregnancy." In one hundred and nine cases in which I observed carefully the fetal pulse there were fifty-five males and fifty-four females; the average pulse of the males being 125, that of the females 143. Taking the average of all the cases, it would give 134 as the dividing line between the two sexes. A range of four beats above and four below this point would embrace a doubtful zone, in which it would be impossible to predict the sex with any degree of certainty. The rule deduced from these cases may be tabulated thus:

From 110 to 125 the sex will be almost certainly male.
From 125 to 130 the sex will be probably male.
From 130 to 134 the sex will be doubtful, with chances in favor of male.
From 134 to 138 the sex will be doubtful, with chances in favor of female.
From 138 to 143 the sex will be probably female.
From 143 to 170 the sex will be almost certainly female.

In the fifty-five cases of males there were only six where the fetal pulse was above 134, and in several of these only one examination was made. Five of the cases ranged between 134 and 130, sixteen between 130 and 125, the remainder being below that limit. Of the fifty-four female cases there were only five whose hearts beat lower than 134, seven between 134 and 138, sixteen between 138 and 143, the remainder being above that limit. In the forty-one cases recorded by Dr. Cumming the average pulse of the male was 131, of the female 145, of both sexes 136; while in fifty-six cases tabulated by Steinbach, and quoted by Æneas Munro, M. D., of Glasgow, the average of the female pulse was 148 and of the male 131. Though the above rule is not infallible, yet it is sufficiently correct to enable us to predict the sex with a great degree of probability.

4. The sounds produced by the movements of the fetus are very irregular in character, and of no very great value beyond indicating that the fetus is "alive and kicking." The sounds may be produced either by the movements of the limbs or by the rubbing of the surface of the child against

the uterine walls; the first conveying the sense of an impulse or stroke, the second that of a friction sound. The movements of the limbs heard and felt on one side of the uterus would indicate that the face looked in that direction.

5. The funic souffle is a murmur produced by some obstruction to the flow of blood through the funic arteries. It is distinguished from the placental souffle by being synchronous with the fetal pulse instead of the maternal. Having decided that the murmur is caused by funic obstruction, it remains next to determine by what the obstruction is produced. It may be caused in one of three ways: first, by compression of the cord between the bony prominences of the mother and those of the child; second, by the cord being tightly twisted one or more times around the neck or limbs of the child; third, by a knot being tied in the cord.

(1) The compression of the cord between the bony prominences of the mother and those of the child must necessarily vary as the child changes its position in the uterus; and the sound will necessarily then be intermittent—heard at one examination and not at another.

(2) The twisting of the cord around the neck of the child tightly one or more times may cause so much obstruction as to give rise to a murmur, which will be heard most distinctly at the point where the neck has been located by the previous examination, and it will moreover be heard most probably at every examination. When recognized it should warn the accoucheur to be on his guard lest the child be asphyxiated during the progress of the labor.

(3) Should the murmur be heard at every examination, and heard not at the neck of the child, but at some point in the course of the cord, the natural inference would be that it was caused by a knot drawn tightly enough to produce obstruction to the flow of blood.

The obstetrician should then watch with more than usual care lest at any time during the progress of the labor the knot should be drawn so tight as to threaten to asphyxiate the child. Its life could then be saved only by immediate delivery. That the twisting of the cord around the neck may be diagnosed with a tolerable degree of certainty is shown by the following cases transcribed from my notes:

CASE 35—Sarah B., aged thirty-one years, examined May 25th; nine months; fetal heart 120, heard in left inguinal region; head felt at brim of pelvis, breech at the fundus; funic souffle heard over pubis. Diagnosis: male; pres. V.; position L. O. A.; cord around the neck. Delivered June 8th: male; pres. V.; pos. L. O. A.; cord twice around the neck.

CASE 43—I. F., aged twenty-one years, examined June 13th; nine months; fetal heart 140, heard in left inguinal region; head felt at brim of pelvis, breech at fundus; thighs felt to the right of the median line, arched back to the left; a funic souffle also heard over pubis (at this and several subsequent examinations). Diagnosis: female; pres. V.; pos. L. O. A.; cord around the neck. Delivered June 13th: female; pres. V.; pos. L. O. A.; cord three times around the neck.

In case 67 a funic souffle was also heard at the neck of the child, and at the labor the cord was found tightly drawn around the neck.

In case 47 a constant funic souffle was heard at the neck of the child, and the cord was thought to be around its neck; but at the delivery the obstruction was found to be caused by an excessively varicose condition of the funis.

6. The separation of the placenta will usually give rise to a tearing sound, distinctly audible to the ear placed over the abdomen. It may be of service in distinguishing a placenta simply retained, though already separated from one still adherent. The sound will be heard during the contraction of the uterus as the placenta is torn from its attachment.

7. The crackling sounds caused by the evolution of gases from the decomposing fetus serve but to confirm the diagnosis of the death of the child previously based upon the

absence of the fetal heart-sounds and movements. The crackling sounds resemble the fine moist rales heard in the chest, or the rales in œdema of the lungs. The placental souffle may still be heard, though the heart-sounds will be absent.

Thus we have shown that inspection, percussion, palpation, and auscultation may each in turn furnish information of inestimable value to the obstetrician. It enables him by the more intelligent discharge of his duties to reduce to a minimum the dangers both to mother and child. Instead of trusting blindly to nature, as is, alas, too often done, he can during the progress of the labor watch over the welfare of the child just as carefully as he can over that of the mother. Many a child has been still-born that might have been saved had the accoucheur by a physical examination recognized its danger and instituted the proper measures for its relief.

A shoulder presentation may be easily and certainly recognized by a physical examination, and at any time before the rupture of the membranes changed by external version to a vertex presentation. The following cases show the ease and certainty with which this may be done:

Case 58—Annie S., aged fifteen years, examined September 15th; is in her ninth month; uterus seems by inspection and percussion broader than usual, and by palpation the head is recognized in the right iliac fossa, while the breech is felt on the opposite side, the arched back crossing the median line above the pubis. By auscultation the heart can be heard very distinctly a little to the right of the median line, and beating 130 per minute. Diagnosis: probably male, left-shoulder presentation, dorso-anterior position. By external manipulation the head was pressed downward over the brim of the pelvis, the breech being at the same time pressed upward to the fundus, the presentation then being cephalic, and the position the first Subsequent examinations revealed the child in the same position, and on September 28th she was delivered of a boy, the diagnosis proving to be correct.

Case 60—M. W., aged nineteen years, examined October 1, 1872; uterus broader than usual; head felt on right side, breech on the left, and the arched back across the median line; the heart is to the right of the median line, beating 131. Diagnosis: left-shoulder presentation, dorso-anterior position, probably male; changed by external version to cephalic presentation on first position, being delivered of a male child, October 9th, after an easy labor.

Case 92—C. A., aged twenty-four years, pregnant eight months; suffering severely with chronic cystitis; examined May 17, 1873. By inspection and percussion uterus broader than natural; head recognized on left side and breech on the right, while the movement of the limbs can be distinctly felt in front; heart-sounds heard, not very distinctly, a little to the left of the median line, 126 per minute; the placental murmur heard at the left upper lateral segment. Diagnosis: left-shoulder presentation, dorso-posterior position, probably male. Because of the cystitis it was determined not to produce version until the bladder was relieved. This was accomplished by proper treatment in two or three weeks, when a second examination disclosed that spontaneous version had taken place, the head being felt at brim of pelvis, the breech at the fundus, and the heart being heard in right inguinal region, beating still 126; placenta heard at same place. The delivery a day or two subsequent proved the diagnosis correct in every particular.

It is necessary to re-examine the case at intervals to see that the fetus does not resume its old position, this being the more imperative during the first part of the labor. I believe firmly that were every case examined prior to the rupture of the membranes, the abnormal presentation recognized, and the proper measures instituted, there would be no necessity for the record of an unnatural labor. In the same way a breech presentation may be recognized, and by external version changed to a vertex presentation.

The ability to predict the sex may sometimes be of very great service beyond the mere pleasure of exciting the curiosity and wonder of the parents and friends. In 1872 I was consulted by the husband of a lady, the subject of morbus coxarius, as to the propriety of inducing premature labor. In her first confinement, after a very protracted and dangerous labor, she was delivered, by the forceps, of a very large still-born male child, her convalescence being very tedious. She was then in her eighth month, when I made a physical examination, which disclosed that she was not as large as before, the presentation and position natural, the heart beating 138, and heard in the left inguinal region. Arguing that the presentation and position being natural, and the child in all probability female, and hence smaller than the former one, I therefore advised that she be allowed to go to full term, and gave it as my opinion that she would not have any serious trouble at labor. In five or six weeks, after a moderately easy labor, she was delivered of a girl, mother and child doing well.

It has been asserted by some observers that the fetal heart beats at the same rate, no matter what the period of gestation. I have found that as the gestation progresses there is a gradually slight diminution in frequency.

CASE 30—Mrs. V., examined at six and a half months. The fetal heart was found beating 126, and a male child was diagnosed. At full term the fetal pulse was 116; the diagnosis being verified at the delivery, a few hours afterward, of a large healthy male child.

In the latter months of pregnancy the position of the child is much more frequently changed than is generally supposed. This change of position, most frequently from right to left, or the reverse, may take place at any time prior to the rupture of the membranes, and for this reason the case should always be re-examined at intervals during the labor, that any change may be detected and no error in diagnosis be inferred. Where the amount of liquor amnii is unusually large, and the child smaller than usual, even spontaneous version may occur, as shown by the following case, which occurred at the City Hospital, the notes being preserved for me by Dr. J. A. Metcalfe, one of the resident graduates:

Case 126 — Mrs. B., aged twenty-seven years, mother of three children, having had two abortions at two and a half and three and a half months. Examined September 21st, in labor at full term; the fetal heart beating 150, and heard most distinctly in lower segment on left side; the head distinctly felt over pubis, the breech recognized at fundus, the limbs on right side, and the arched back to the left. Diagnosis: female; pres. V.; position first. A digital examination disclosed the os dilated fully three inches, the membranes unruptured, the hard globular head being distinctly felt, and the fontenelles and sutures clearly recognized. At 12 P. M. the pains were very severe, the heart still heard in left inguinal region, and the position unchanged, except that it was much harder to reach the head by a digital examination as it rested on the promontory of the sacrum. At 12:30 A. M. no presenting part could be felt; and upon listening for the fetal heart it was found to be beating in the upper segment of the uterus, being heard most distinctly on a level with or a little above the umbilicus and to the left of the median line; the inference being that the child had changed its presentation and position, now presenting by the breech, the sacrum being to the left acetabulum. The next two pains brought the breech fully into the hollow of the sacrum, the membranes ruptured, the child being delivered in a few minutes. The amount of liquor amnii was very large, and the child of moderate size.

In this case the diagnosis of the position and presentation of the child, made by a physical examination, was confirmed by a digital examination, which was so distinct and clear that there was no room for a mistake. The entire disappearance of the presenting part showed that the child was in the process of turning, which inference was confirmed by finding the heart beating above the umbilicus instead of in the lower segment of the uterus, as at the previous examinations. It was still further strengthened by soon discovering, by a digital examination, the breech of the child in the hollow of the sacrum, and its speedy delivery upon the rupture of the membranes.

For the preservation of the notes of many of the cases which I examined in the obstetric service of the City Hospital I am indebted to the kindness of the resident graduates: Drs. H. A. West, J. H. Leslie, C. B. Doll, T. W. Gardner, J. A. Metcalfe, F. Paschal, W. T. Simral, and Joseph Van Gasken.

In recording the notes of the examination of cases I have found great assistance in using the accompanying record chart, which may be filled out without loss of time, and shows at a glance the presentation, position, sex, and placental attachment. The following case copied from my notes will illustrate the manner of using it:

RECORD CHART FOR FETAL PHYSICAL EXAMINATION.

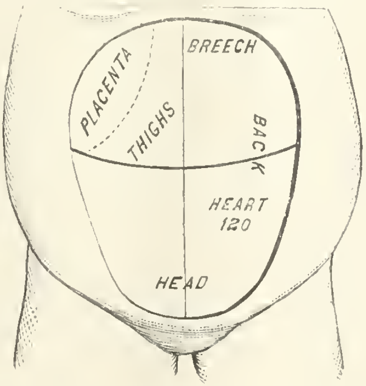
Name S. F.; age 20; date, May 21, 1873; Children, M. 0, F. 0; period of gestation, 9 months. Diagnosis: pres. V.; pos. L. O. A.; sex M.; placenta, right upper lateral segment.

Inspection normal.

Palpation.

Percussion normal.

Auscultation.



Date of delivery, May 31, 1873; pres. V., pos. L. O. A., sex M.; placenta removed, attached right upper lateral segment.

In this case inspection and percussion showed that the uterus was normal in size and shape. By palpation the head could be felt at the brim of the pelvis, the breech at the fundus, the arched back on the left and the limbs on the right. By auscultation the fetal heart was heard most distinctly in the left inguinal region, beating 120, and the placental murmur was plainly heard in the right upper lateral segment of the uterus. The diagnosis was then plain, and proved correct in every particular.

The blank space on either side under the head of inspection, palpation, percussion, and auscultation is designed for such notes as can not be written in the diagram.

Louisville.

A CASE OF GUN-SHOT WOUND, WITH PECULIARITIES.

BY DRS. SHACKELFORD AND HAPPEL.

Henry Carter, colored, twenty-one years of age, was shot about three o'clock P. M. Tuesday, July 22, 1873. Previous health perfect; had taken a small quantity of whisky early in the day; was seen within half an hour after being wounded lying on the roadside; complained of intense pain, deeply seated in the pubic region. A small opening, resembling an incised wound, was found in the left iliac region just above Poupart's ligament, about two inches from the linea alba, extending obliquely downward. No external hemorrhage. There was a constant desire to micturate, and a catheter was at once passed into the bladder, but not a drop of urine could be drawn off with the patient in *any position*. No blood was perceivable on the instrument, and no urine oozed from the external wound. He had not urinated since twelve o'clock M. One third of a grain of sulphate of morphia was at once given hypodermically. An ordinary and then a Nélaton's probe was passed into the wound, revealing extensive laceration of the tissues beneath the cutis. Each probe passed readily in a direction posteriorly and toward the median line, impinging upon the inner edge of the os pubis, about half way between the spine of the pubis and the articulation.

After several ineffectual attempts to discover the ball had been made, as he was still suffering greatly, one third of a grain of sulphate of morphia was again administered hypodermically, and he was then conveyed in a wagon to a house half a mile distant. The desire to micturate still being troublesome, the catheter was again introduced into the bladder, with no result, either in the form of urine or blood. More morphine was then given him to allay a fixed, burning pain just in the region of the bladder, from which he was suffering greatly, and he was then left a little more quiet, with a cloth wet with cold water over the wound.

Nine P. M.—Condition about the same; pulse almost normal in every respect, there being little or no shock; catheter again introduced slowly and carefully; no urine present, but a small quantity of blood was detected in each eye of the instrument. One fourth of a grain of sulphate of morphia was administered per orem, and three similar portions were left to be given during the night.

Seven A. M.—He had slept a little during the night. All the morphine had been given. At three o'clock A. M. he had passed urine easily, and again at six o'clock. The last was exhibited. There was no blood, but a little mucus or pus. The external orifice of the wound had closed, and was dry. Its edges were separated and a small poultice was applied. No fever; pulse and temperature about normal; not so much pain as before; some appetite; was allowed a little coffee; was quite cheerful.

Nine A. M.—Complained of intense burning pain around the seat of the wound internally; administered one third of a grain of sulphate of morphia hypodermically; was quiet and sleepy in a few minutes; pulse slightly quickened, 86 per minute; temperature 99½°; tongue slightly coated.

Twelve M.—Had rested under his morphine; passed urine easily; can turn in the bed without much pain; decubitus on his back; knees drawn up; pulse and temperature unchanged; pain extending internally along the linea alba.

Five P. M.—Condition same; continue morphine.

Eight P. M.—A change had taken place; patient had vomited once or twice; pain had increased and spread, and was intense over the whole abdomen, which was slightly tympanitic; pulse 100, hard and wiry; temperature 103°; tongue coated; respiration hurried and short, 36 per minute; features pinched; profuse perspiration; thirst increasing; urine passed readily, and normal in quantity; some mucus or pus present; desires to micturate oftener; no blood; a burning pain about the neck of the bladder; decubitus on the back, with the knees drawn up, though he could turn from side to side. This condition had not been preceded by any cold stage. Patient rational. One half grain of sulphate of morphia was administered hypodermically, and ordered repeated in one-fourth-grain doses every hour per orem till pain was controlled. Gelseminum and niter were ordered to reduce the fever. Patient soon became more comfortable.

Two A. M.—All the symptoms more aggravated; features more pinched; pulse 150, hard and wiry; temperature 104°; respiration very rapid; abdomen more tympanitic; tongue more coated; was pronounced rapidly approaching dissolution. Treatment continued and warm applications made to the abdomen.

Seven A. M.—Patient died.

Post mortem of the abdomen only. When the cavity was opened a fetid gas escaped. With difficulty the walls were separated from the intestines, which were firmly agglutinated by recently-deposited lymph and fibrin. More than a pint of dark-colored, sero-purulent fluid was found in the cavity. The ileum, about fifteen inches from its entrance into the colon, presented *one* opening on its anterior inferior surface, surrounded by an extensive ecchymosis.

Following then the course of the ball, it was found to have impinged upon the upper and inner surface of the os pubis, by which it was thrown upward and backward along the fundus of the bladder, leaving on it spiculæ of bone and *débris* of clothing and hair; and was discovered in the abdominal wall with its conical point projecting in the direction of the opening in the intestine, on the margin of the opening in which there had been deposited several small pieces of bone. In removing the bladder it was torn off just beyond the neck. The body and fundus showed no rupture.

We would call attention to—1. The symptoms of penetration of the bladder, which, so far as examined, was intact except the ecchymosis; 2. The peculiar lodging-place of the ball; 3. The penetration of the ileum by the point only of the ball, the intestine at the same time being empty; 4. The absence of urine from the bladder; 5. The delay of marked symptoms of peritonitis; 6. The absence of shock.

FATTY TUMOR OF THE BLADDER.

BY A. LIEBIG ELEAN, M. D.

Patient, a negro boy, aged fourteen years, came under my treatment on the 2d of July, 1872; says he received a blow from the handle of a plow, while plowing, about three weeks before I saw him; complained of pain in the bladder and frequent inclination to void his urine, which was mixed with blood and passed with difficulty. There was no malarial complication in his case, his previous health having been good. I prescribed for him without making any instrumental examination of the bladder, as his symptoms were not urgent.

I saw nothing more of him until December 8th, when his symptoms became more urgent and his general health began to fail. Thinking perhaps this state of things might be kept up by a "stone," I sounded him; but instead of finding a stone I found a tumor filling the entire cavity of the bladder. He had only passed a few drops of urine in twenty-four hours; and I introduced a catheter to relieve this state of things, but only succeeded in getting a few drops, as the catheter came in contact with the tumor immediately upon entering the bladder. For several days before his death he suffered violent pain in micturition, especially immediately after passing the last drops. His extremities became œdematous; the face, especially under the eyes, was bloated, and his general appearance anæmic. On post-mortem examination a tumor was found, attached by a short pedicle to the bas-fond of the bladder, about the size of an orange, and completely filling the bladder, giving it the appearance and feel of a solid body. It was soft, doughy, and semi-elastic, with a smooth and uniform surface, and covered by a capsule or investing membrane of a whitish or grayish color. The internal surface of the bladder was corrugated and its walls greatly thickened. The other organs were healthy.

I report this case not on account of any special symptom it presented, but simply on account of its rarity. Gross, in speaking of this subject, says: "Various anomalous growths, known by the terms fatty and steatomatous, are sometimes observed in the bladder; but their occurrence is so rare that it is scarcely necessary to allude to, much less to describe them."

TABERNACLE, TENN.

PREMATURE RUPTURE OF THE FETAL MEMBRANES AND ITS MANAGEMENT.

BY THOMAS CHESNUT, M. D.

I desire to present to the consideration of the profession the subject of rupture of the fetal membranes, and consequent escape of the *liquor amnii*, prior to the completion of pregnancy, and the treatment of cases in which this accident occurs.

Occasionally such rupture happens before the child is viable; and then, unless timely and judicious treatment is interposed, labor soon sets in, and the death of the child is inevitable. How to meet such an emergency and avert its fatal result is certainly a matter of the utmost importance. That it is possible, at least in some cases, to do so I have not a remaining doubt; as I have during my professional life, which has embraced more than a third of a century, successfully managed three well-marked cases, the life of the child in each instance being saved, and no detriment to the health of the mother happening.

My first case occurred in the spring of 1845. The patient, Mrs. J., while walking was surprised on finding an escape of water from her vagina, a quart as she supposed. The accident occurred toward the latter part of the seventh month of gestation. I was immediately sent for, and on my arrival found my patient in bed, suffering from a severe shivering fit, the result in a good degree of alarm, as I supposed. As she had no pain, and no impression as yet having been made upon the os uteri, I gave her a quieting draught, left directions for the night, and returned home. On calling the next morning I found my patient calm and quite cheerful, having passed the night without pain or much uneasiness.

The patient, on making inquiry as to how long it would likely be before she would get through, was replied to by a lady neighbor, who remarked "that it might be some time." Said she, "I once met with a similar accident when I was a little more than seven months gone, and it was near two weeks after the waters broke before I was confined." In reply to my inquiry if the child was alive when born, she said "it was, and a poor scrawny little thing it was, too; but in a few weeks it began to improve, and soon became a nice, plump baby."

From the suggestion afforded by this case the following inquiry presented itself to my mind: If this lady, without any precautionary or preventive means having been resorted to, was not confined till two weeks after the accident occurred, might it not be possible, by a judicious course of management and treatment, to prolong the period of gestation to a still greater length of time. After mature reflection I determined to hazard the experiment, and stated my purpose to the patient, in the presence of her husband, upon the condition that she would, for the sake of giving her child its best chance for life, submit to such requirements and means as her condition from time to time might suggest; to all of which she readily consented. I then directed her to remain in bed, keep as quiet and composed as possible, and on the slightest approach of pain or uneasiness in the uterine region to take a portion of a solution of morphine which I had prepared for that purpose, repeating the dose as occasion might require. This treatment of rest and morphine, occasionally alternated with lavements of laudanum and starch-water, was kept up, her bowels during the time being regulated by mucilaginous injections, until the twenty-third day after the accident, at which time expulsive pains ensued, and after a comparatively short and easy labor she was delivered of a living female child, bearing unmistakable marks of having made its appearance a little ahead of time. The child, though feeble, from the first nursed its mother, and after three or four weeks commenced to gain in flesh and grow rapidly. The patient's recovery was of the most favorable kind, this being her fourth confinement. This was one of the instances in which ignorance became the mother of bliss; for if I had been as well acquainted with the authorities on the subject at that time as I now am, I certainly would not have had the moral courage to try the experiment.

My second case was a Mrs. P., who, according to her count, was near the middle of the seventh month of her second pregnancy, at which time she was much surprised on finding a free escape of water from her vagina. She immediately took her bed and sent for me. On my arrival I found her greatly alarmed in consequence of the accident, but soon succeeded in quieting her fears. I gave her a history of my success in a similar case, and proposed with her consent to repeat the experiment in her case. To this she readily consented, promising strict conformity in every respect to my directions. I advised her to remain in bed and keep as quiet and composed as possible, and on the first approach of pain or uneasiness to take a full portion of an anodyne mixture which was ordered, and continue its use as occasion might require for subduing nervous restlessness and assuaging pain. With this patient I had comparatively little trouble, she being possessed of a remarkable degree of will-power for one of such a delicate, nervous temperament.

The accidental or spontaneous rupture of the fetal membranes occurred on the 10th day of March, 1857; and by a strict conformity to the requirements and rules prescribed the expulsive action of the uterus was held in abeyance till the 22d day of April, at which time her labor commenced, and every thing being favorable she was soon delivered of a living male child. The child presented a diminutive, wasted, premature appearance, weighing only four pounds. Shortly after respiration was established it commenced a low and pitiful moaning, which is regarded as the precursor of speedy death. This symptom after a few hours began gradually to disappear, and its breathing became more regular and easy. It commenced in a few hours to take a little nourishment from a tea-spoon, and in a day or two took the breast, and continued to do so with eagerness, but without any perceptible improvement in either its strength or appearance. At the end of the first month its face remained wrinkled, its skin dry, shriveled, and icteric. From the eagerness with which the child took the breast, and the apparently little that it obtained therefrom, I was led to conclude that its want of improvement was the result of starvation instead of disease. I suggested to the mother the propriety of procuring for her child the services of a healthy wet-nurse, but she refused to surrender the care of her child to any one else. Finding her child at the expiration of the third month to weigh but four and a half pounds, she reluctantly consented to the change; and a nurse, young and healthy, was soon procured, willing to take up her abode in the family and assume the full charge of the babe. The infant from the commencement of the change began to improve, and in a few weeks became a plump, healthy child. That unpromising infant has grown to be as healthy and promising a lad as our city affords, and is the only son of one of our wealthy bankers.

The third, last, and most difficult one to control was the case of Mrs. H. In her first pregnancy she aborted between the third and fourth months. In her second, a twin case, premature labor occurred between the seventh and eighth months, and both children were still-born. In her third pregnancy, both parents being exceedingly anxious for a child, she was at the close of the sixth month placed under my care, with a special request to conduct her, if possible, safely to her full term. Supposing from her past history that she had the misfortune to possess a uterus more than ordinarily irritable, I recommended the strict observance of such precautionary measures as in my judgment were calculated to guard against a repetition of former misfortunes. Up to near the close of the seventh month her condition was quite favorable; then one day, while engaged in active work, and ascending a stairs carrying a heavy weight, she suddenly felt, as she said, "something give way and a splash of water on the floor." The result was, as might be expected, alarm attended with a paroxysm of nervous agitation. I was immediately sent for, and on my arrival gave her an opiate, assuring her at the time that there was still hope of saving the life of her child, if she would patiently submit to such means and restrictions as her condition might from time to time require. She readily consented to submit to every requirement that would promise safety to the life of her child; and for three consecutive weeks she was confined to her bed, and kept almost constantly under the influence of laudanum, as it acted most happily in tranquilizing her nervous system and obviating pain. The necessity for keeping her so constantly under the influence of the drug arose from the fact that as soon as she was permitted to pass from under its influence slight pains, with an increased flow, would at once ensue. Up to this time she was not permitted to sit up in bed, and was required to use the bed-pan instead of the chamber. Having thus reached the latter part of the eighth month, she was permitted every morning to exchange for a brief time the bed for the lounge.

In precisely one week from the time that this indulgence was granted I was summoned to visit my patient, and on my arrival ascertained that she had already suffered from a number of pretty severe bearing-down pains, and after a short and easy labor was delivered of a living male child. The membranes ruptured on the 22d day of June, 1873, and she was delivered on the 22d of July. This, though not more than an eight-month's child, was rather larger and more vigorous than either of the other two. It soon took the breast, from which it has received an abundant supply ever since. The patient suffered no particular inconvenience from the long-continued use of opium, and had a favorable recovery. The child, after the first month, began to improve, and at the present time is a healthy, bright little fellow.

In none of the foregoing cases was there any protrusion of the membranes; nor did a careful digital exploration, especially in the last two cases, reveal either a perforation or rent in the membranes, and but little fluid escaped at the time of delivery. In all three of the cases there was from the time of the accident a continuous drainage of fluid, keeping the soft parts in a well-lubricated and relaxed condition, and this I supposed to be in a good degree the cause of their short and easy labors. The purpose of this practice is to save life by retaining the fetus in utero until it is sufficiently developed to enter with comparative safety upon a new and independent state of existence. Now, if there are any such means within the power of the profession by which so desirable an object can be accomplished, surely that class of helpless, dependent creatures are entitled to all the benefits that such measures are capable of affording. I am not ignorant of the fact that the possibility of prolonging gestation for any considerable length of time after a rupture of the fetal membranes has taken place is denied by authors of the very highest repute. As Ramsbotham has expressed his opinion more fully and positively than perhaps any other author on this subject, I have selected his System of Obstetrics from which to make two or three quotations.

On page 588 he remarks: "If by any accident the ovular membranes become ruptured, gestation is suspended and abortion necessarily ensues. At any period of pregnancy then a puncture through the chorion and amnion will sooner or later occasion the premature evacuation of the uterus." Again he remarks: "Cases indeed are reported in which it is supposed that a laceration of the involucra had taken place, and had subsequently become closed, the womb retaining its burden until the period was fulfilled. I am much inclined to the belief that in these instances some mistake had occurred, and error might easily arise from two if not more causes."

The causes here referred to, in the first place, is the occasional accumulation of a limpid serous fluid, contained between the two ovular membranes, resembling precisely in appearance the liquor amnii. In such case the chorion might rupture, giving vent to the fluid, while the amnion remained intact without seriously interfering with the process of gestation; and second, a morbid condition of the glandulæ nabothi, which occasionally occurs, producing a copious discharge of a serous secretion, which may escape in gushes, giving a deceptive idea of the true character of the discharge. But, as if determined that his views on this subject should be fully understood, he further remarks: "But although we are liable to these sources of error, I am perfectly persuaded that if both membranes be broken, and the least drop of water contained within the amnion flows away, the process of gestation is interrupted to such an extent as to insure the commencement of uterine contraction within a short time."

As neither of the causes assigned by that eminent author as a reason sufficient to account for the free escape of the fluid from the vagina without interrupting the process of gestation would properly apply to the cases above reported, as they would fail to afford a reasonable cause for the absence of the liquor amnii, which was found to be the condition in each case, this question can only be settled by repeated experiments and careful observation. And as the experiment would not to any considerable extent increase the dangers of the mother, and even if it did, surely no female possessed of the proper feelings of a mother would hesitate for a moment to take the risk, if by so doing she could greatly increase the chances of her child's life. It is not to be expected that every case, or even a large minority of the cases belonging to this class of accidents, can be protracted to a period of safety for the infant; but, judging from my own experience, I feel fully persuaded that a sufficient number of cases can be saved to insure the practice a respectable position among the more important contributions to conservative midwifery, if the profession can be induced to give the subject the attention that its importance demands.

LAFAYETTE, IND.

Whatever any physician may believe as to the rupture of the fetal membranes weeks prior to the occurrence of labor, all will agree as to the practical value of the advice given by Dr. Chesnut in his interesting communication.

As will be seen in the concluding portion of the extract which we shall give from one of the most eminent of French obstetricians, Depaul, the purpose and part of the method of treatment of the two are the same, though our Indiana friend and the Paris professor differ as to the condition, the consequences of which are to be averted by the means recommended in common.

The extract is from the second fasciculus of Depaul's Clinical Lectures on Obstetrics, a most valuable volume, now in course of publication in Paris.

"In certain cases during pregnancy, but independent of labor, women find their garments wet with a profuse watery fluid coming from the vagina, and the physician is called to decide whether this is the amniotic liquid indicating rupture of the membranes. If it be amniotic, a peculiar, faint odor will be noticed, and also the flow will occur from time to time accompanying uterine contractions; besides, the finger lifting up the fetal head will permit a slight oozing, and if a small quantity of this liquid is collected in the hollow of the hand, its character is easily recognized; for if there are found suspended in it little whitish particles of fatty matter, it is amniotic, these particles being from the sebaceous coat which normally covers the body of the infant. So too, if the liquid is yellow or greenish, it is discolored by the meconium. But certain abundant watery discharges may occur, not coming from the cavity of the membranes, and are known as *false waters.* The generally-received explanation of this formerly was that these discharges proceeded from a rupture of the chorion, a certain quantity of fluid being interposed between it and the amnion. But this amount is generally small, exhausting itself in a single discharge, and can not produce those frequent and sometimes profuse flows which we are here considering, unless admitting with some authors that an endosmotic transudation through the amnion occurs, which will thus explain the abundance of the effused liquid.

"A much more rational explanation, which has been given by Naegle, and which is to-day demonstrated by undoubted facts, is that a certain part of the ovum is detached, and that the capillary vessels ruptured at this place of detachment permit the oozing of the serum of the blood which thus accumulates between the membranes and the uterine wall, and which may remain in its first position a greater or less length of time, until, either from a continual increase or from external violence, the detachment of the membranes continues, and the fluid arrives at the os and is suddenly discharged. It is easy to see that this fluid will be much greater as the extent of the detached surface increases; so too we readily perceive that there may be a continual oozing from this surface and an external flow, until the ovum is applied anew to the uterine surface and the torn capillaries closed. In fact, if a patient suffering with this discharge is required to observe complete repose, the flow diminishes and then ceases. In some cases this phenomenon may be repeated several times in the same pregnancy; and I have observed women in whom this watery discharge has continued fifteen days, three weeks, a month, and even longer. With some this occurs in different pregnancies, and I have required patients to remain in bed several months when in preceding pregnancies the flow has resulted in premature labor, such termination not being rare in these circumstances.

"The liquid of the *false waters* is odorless, is clearer, more transparent than the amniotic liquid, and presents all the characters of serum."

Still more interesting with reference to Dr. Chesnut's views is the report of a case (by M. Bailly, in Prof. Pajot's *Gazette Obstetricale*, March 20, 1673) of *rupture of the membranes at eight months, and acconchement thirteen days after.* In his remarks upon it Bailly refers to a case, reported by Dr. Campbell, where pregnancy was prolonged seventeen days from the rupture of the membranes, labor ordinarily commencing from a few hours to three or four days after this accident occurs. He alludes to the explanation ordinarily given of these cases — viz., a serous collection between the chorion and the womb—as the source of the discharge; but states that the lessening of the size of the womb, the more distinct definition of parts of the fetus felt through the abdominal walls, and the continuousness of the discharge militate against this view. He finally remarks, however, that the only way to arrive at absolute certainty as to the source of the fluid is to use the test which we have already given in the extract from Depaul. T. P.

Reviews.

Diseases of the Ovaries: their Diagnosis and Treatment. By T. Spencer Wells, Fellow and Member of Council of Royal College of Surgeons of England, Surgeon to the Samaritan Hospital for Women, etc. New York: D. Appleton & Co. 1873.

The work performed by the author of this volume in introducing and establishing the operation of ovariotomy is well known, and its value recognized every where. Beginning to operate in 1858, at a time when it was not yet fully accepted by the profession as a legitimate procedure, he has steadily and warmly advocated its claims, and published the result of his operations with such fairness and candor as to win for him the firmest confidence of his medical brethren. This confidence, supplemented by a most favorable situation in a densely populated country of no great extent, has given him an abundance of opportunity for the performance of the operation, surpassing that of any one who has ever lived, and, we doubt not, that of any one in the future. This work is published after the completion and gives the results of five hundred operations, and this statement suffices to show with how great authority we may receive his teachings upon every thing relating to this subject.

We may briefly give the statistics of these five hundred operations by saying that three hundred and seventy-three of the patients recovered, giving a mortality of 25.4 per cent.—a rate "smaller than that of many capital operations which are constantly performed without hesitation in suitable cases." When we reflect upon the addition thus given to the sum total of human life by rescuing this proportion from a certain and speedy fate we can not but feel an increased pride in the benefits conferred by our profession upon humanity.

During the fourteen years in which Mr. Wells has performed ovariotomy five hundred times, he has found it impossible to complete the operation in twenty-eight cases, and in twenty-four others an exploratory incision was necessary to complete the diagnosis. Of these latter twenty-four, seventeen patients recovered from the incision and seven died; of the twenty-eight former, death followed in eleven or twelve in from one to eleven days after the attempt at removal of the tumor.

It is impossible for us to go into much detail in regard to this work, however interesting it might be to do so. The operation is of course the most attractive portion of the work, and every particular in regard to it, from the preparation of the patient to the minutiæ of the after-treatment, is fully given; and while stating his own mode of procedure and preferences, he is careful to state the experience of others. He is very partial to the extra-peritoneal treatment of the pedicle, and by far prefers the clamp whenever the case permits; and it is singular how unfortunate he has been with the ligature, while other operators have had excellent success with it and resort to no other plan. In closing the abdominal wound he uses silk sutures, and thinks that "the including of the peritoneum within the stitches is of the utmost importance for the success of the operation."

Not the least interesting feature of the book is the experience of the author with the new anæsthetic, chloro-methyl, or methylene, and his estimate of its value. He was for a long time dissatisfied with chloroform, and especially on account of the vomiting caused by it. He tried a mixture of ether and chloroform in various proportions, and found just the disadvantages and evils which Snow long since pointed out. The more rapid evaporation of the ether leaves the chloroform vapor alone to be inspired, not only "when the patient is least able to bear it," as Mr. Wells says, but also when the surgeon thinks he is inhaling a mixture, and the patient is therefore betrayed into actual danger from the use of false measures of security. He then tried the mixture of alcohol, chloroform, and ether, and we are glad to find has nothing to say against it, for we are convinced of its great difference in mode of evaporation to the mixture of ether and chloroform, and of its much more regular action and greater safety than pure chloroform. Methylene has, however, banished all these from use in the author's hands, and certainly justly according to his experience. He has used this anæsthetic about two hundred and eighty times for ovariotomy, in some thirty-five other cases of gastrotomy, and in more than one hundred other operations of more or less severity, and has seen no bad results. In some cases the insensibility has been maintained for forty-five minutes to an hour, and it is very exceptional that vomiting is occasioned by it. The perusal of this causes us to regret the fact that methylene has not yet been introduced by our manufacturing chemists and placed within the reach of medical men in this country.

We are not pleased with the way in which Mr. Wells speaks of Dr. McDowell, and we know no Kentuckian will be. There is a deprecatory tone as to the credit due him for being the first operator for ovarian tumors, and an evident effort to heighten the value of certain "suggestions" as to its feasibility made by "British surgeons." We think but a moment's consideration of the circumstances under which Dr. McDowell operated should be sufficient to induce any one rather to add to his well-earned laurels than to belittle his fame, and this the more in proportion to the person's acquaintance with the dangers and difficulties of the operation. When Dr. McDowell operated the country around him was but little better than a wilderness. He was entirely without all those appliances and instruments which we now call to our aid, without opportunity of recourse to instrument-makers, without anæsthetics, without trained assistants or nurses, without professional counsel and aid, without any published experience to guide him; and thus singly and alone, with his own brave heart and skillful hand, he made this great contribution to his profession, and rendered this great service to suffering humanity. To have fully and freely accorded the honor due to his memory would have been a graceful act on the part of Mr. Wells, which he could have well afforded to do, but has not done.

In conclusion we must say that the work is one which, from the author's experience alone, must head the list of all other works on the subject, and one which no one who undertakes to study the subject can do without. J. C. R.

A Female with Double Organs of Generation. By WASHINGTON L. ATLEE, M. D., of Philadelphia. Extracted from the Transactions of the Medical Society of Pennsylvania.*

The *title* of this paper is an error. The most that Dr. Atlee claims in the text is that he has examined a woman having two vaginæ and two uteri, and he supposes she has four ovaries, but states distinctly that "the labia and other external organs were as usual." Now this is very far from making out a case of "double organs of generation," and it is still farther when we remember that the assumption of four ovaries is at variance with the usual law which obtains in cases of *duplicity* of the vagina and of the uterus; for really such *duplicity* is all that Dr. A.'s narrative establishes, all that is in accordance with the laws of the intra-uterine development of the sexual organs, all that is in accordance with what has hitherto been observed.

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* Dr. Atlee's case does double duty, for it appears also in the Transactions of the American Medical Association.

But let us briefly narrate the case, and then we shall make some further remarks in reference to the anomaly.

The subject is a lady thirty years of age, menstruation commencing at thirteen, regular and painful, married nine years, and sterile. Five years previously—that is, after having been married four years—she was under Dr. Atlee's care for three months because of this sterility, the Doctor believing it to be consequent upon contraction and inflammation of the cervical canal.

The sterility still continuing, she consults him again in April, 1873; and, guided by the lady's information, a second vagina was found on the left of the one hitherto used in speculum examinations, a firm wall like the recto-vaginal separating the two canals. Each vagina conducted to a uterus, this latter organ on the right side admitting a sound two inches, that on the left two inches and a half. A sound was put in each uterus, "and on placing one hand over the pubes, while moving each sound, two distinct bodies could be felt."

Coition had always taken place by the right vagina; Dr. A. advised the left to be used for this purpose, as he felt assured that the result would prove more satisfactory, because "the left uterus, which was still in a state of virginity, was much more fully developed, and the condition of its os and cervical canal was much more favorable for impregnation." Dr. Atlee remarked that "gestation might be going on in one uterus and menstruation in the other at the same time, or that both uteri might be impregnated at different periods, and children born at full term within a few months of each other."

At first glance one might conclude from the title and narrative that nature had been lavish in her gifts to Dr. Atlee's patient; but a moment's study of embryology and a brief reference to the normal condition of the sexual organs in some of the inferior animals would instantly dissipate such belief. The fact is, nature had failed in her work; there was an arrest of intra-uterine development of the sexual organs;

and the result is, as to double uterus and vagina, a sort of human female opossum. The great majority of permanent teratologic conditions not only represent transitory embryonic states, but also the complete development of corresponding organs in some of the lower orders of animal life.

We beg those who are interested in this study to turn to Dr. Arthur Farre's discussions of the *Development of the Uterus*,* or, better still, to Courty's consideration of *Anomalies of the Uterus*.† They will see at once that Dr. Atlee is mistaken in some of the hypotheses he introduces or suggests in his narrative. The second one of Courty's figures represents a case taken from Eisenmann, precisely similar to Dr. Atlee's; it is an example of *uterus duplex*, *diductus* or *didelphis*. The ducts of Müller, which by their junction and absorption of the interposed wall form a normal human uterus, have remained separate, but each has been developed into a uterus, or rather into the half of a uterus; each of the ovaries and oviduct has undergone normal development on either side.

Four ovaries would be a superfluous work, utterly unarranged for in the *materiel* for and type of development, utterly inconsistent with the arrest of development which has fallen upon the uterus and vagina.

But what of menstruation in one uterus coincident with pregnancy in the other, as Dr. A. suggests? Ovulation, which is the initial term of the series of phenomena constituting menstruation, ceases with the occurrence of conception. Schroeder, in his *Manual of Midwifery*, referring to a case of double uterus and vagina, states that supposing the hymen of one of the vaginæ to be imperforate, "gestation and hæmatometra may co-exist;" but this does not imply that the menstrual accumulation took place during gestation.

Dr. A.'s advice as to copulation taking place through the vagina that had not been used, for the purpose of accomplishing impregnation, was doubtless quite judicious. We need not remind our readers of the peculiar form of the penis in the male opossum, which brings it in relation with the double vagina of the female; nor dare we suggest that a similar formation or malformation in the human male would be admirably adapted for utilizing both vaginæ, and securing impregnation of both uteri in a subject of such duplicity.

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* Todd's Cyclopedia of Anatomy, vol. v., p. 642.

† Second edition of his Treatise on Diseases of Women, p. 80. Paris, 1870.

T. P.

A Treatise on Diseases of the Ear. By St. John Roosa, M. D., Professor of Diseases of the Eye and Ear in the University of the City of New York, etc. New York: Wm. Wood & Co. 1873.

Lectures on Diseases and Injuries of the Ear. By Wm. Dalby, F. R. C. S., Aural Surgeon to St. George's Hospital, London. Philadelphia: Lindsay & Blackiston. 1873.

Although quite a number of works on the diseases of the ear have appeared within the last two years, we do not believe that any of them will compare with that by Prof. Roosa, the title of which we have given above. The author has not only had a very large personal experience to draw from, but has profited by the contributions of all other otologists, French and German, as well as English.

The work opens with an elaborate sketch of the progress of otology, from the earliest period of medical science down to the present day. The great interest attached to this chapter is the sudden revival of this art, which dates from the appearance of Wilde's classical work in 1853, by which the attention of the scientific world was first drawn to the diseases of this important organ.

The work is divided into four principal parts, which treat—first, of the external ear; second, of the middle ear; third, of the internal ear; and fourth, of deaf-mutism and hearingtrumpets. Altogether there are twenty chapters treating of the most important changes met with in the ear. Of these the twelfth, thirteenth, and fourteenth, treating of chronic non-suppurative inflammation of the middle ear, are the most interesting. This affection has always baffled the efforts of the most expert otologists; and Prof. Roosa, though not advancing any very original ideas as to pathology and treatment, is very painstaking in his explanation of the pathological changes met with in the disease. The account given of the various methods of treatment is elaborate, especially the history of the perforation of the tympanum. Although proposed many years ago by Sir Astley Cooper, this operation was but seldom resorted to until within the last two years. Weber-Liel, acting upon a hint of Hyrtl's, who stated as long ago as 1848 that the inflammatory contraction of the *musculus tensor tympani* gives rise to subjective ear symptoms, owing to the impaction of the stapedius in the foramen ovale, after making numerous experiments on the cadaver, first operated upon a woman in the presence of the writer. The relief afforded by tenotomy was so marked as to induce Weber to make further trials, and now this has become one of the recognized operations in aural surgery.

Dr. Roosa also gives two very interesting chapters on acute and chronic suppuration of the ear. The account of the consequences of chronic suppuration of the middle ear is a very excellent one, the importance of the consequent caries and necroses of the temporal bones being sufficiently dwelt upon. The section on the anatomy and physiology of the internal ear is as complete as in the present state of our knowledge of that part of the human economy it could be made.

One of the best features of this very excellent book is the elaborate bibliography appended to every chapter, which contains a list of the latest contributions to the respective subjects. The chromo-lithographic plate illustrating various pathological changes of the tympanum, although quite good, can not be compared to those given by Gruber and Politzer.

The work is admirably adapted to students, none of whom should fail to provide himself with a copy of it.

The lectures by Dr. Dalby contained in this little work were delivered before the medical class of St. George's Hospital in 1872. They are eleven in number, and touch all the important points in aural surgery, but only superficially, as the limited time and space employed would imply. The book can hardly be recommended standing by the side of that of Dr. Roosa. Dr. Dalby draws largely from Toynbee, whose work is rather antiquated, and is certainly far from exhibiting the progress of aural surgery. His treatise, however, will be useful to the busy practitioner who can not find time for elaborate study. It will disappoint any one who repairs to it in the expectation of acquainting himself thoroughly with the diseases affecting the ear. R. C. B.

Diseases of the Throat. By J. SOLIS COHEN, of Philadelphia. New York: Wm. Wood & Co. 1872.

Under the above modest title Dr. Cohen has given us a very elaborate treatise on the diseases of the pharynx, larynx, trachea, esophagus, and nares. The nature of the book is an eminently practical one, pathology and histology being but lightly dwelt on, owing to the fact that the cases observed were almost exclusively met with in Dr. C.'s private practice. Although including all the various affections common to these mucous membranes, special attention has been given to the symptomatology and treatment of the more common diseases. The newest suggestions and researches have been carefully examined and their merits fairly tested.

The work is divided into fifteen chapters, each one of which is devoted to a particular form of disease. The chapter on diphtheria is particularly interesting, owing to the excellent resumé of the different modes and forms of treatment suggested by different men and schools. The vexed question as to the nature of the disease, and whether diphtheria and croup are not really identical lesions, has not been dwelt upon.

In speaking of chronic hypertrophy of the tonsils Dr. C. appears to favor excision of the enlarged glands, and makes no mention of the hypodermic injections of tincture of iodine or the persulphate of iron, which in many cases, as in a hemorrhagic diathesis, would be the preferable plan.

The chapters on the larynx and laryngoscope are quite full, but do not shed sufficient light on the pathological changes met with in this portion of the respiratory tract. The entire book is profusely illustrated with excellent woodcuts showing the different appearances of the organs under discussion. An exhaustive list of authorities is added as an appendix, materially assisting the reader in his studies.

R. C. B.

Dental Caries and its Causes: An Investigation into the Influence of Fungi in the Destruction of the Teeth. By Drs. LEBER and ROTTENSTEIN. Translated by THOS. H. CHANDLER, D. M. D., Professor of Mechanical Dentistry in the Dental School of Harvard University. Philadelphia: Lindsay & Blakiston. 1873.

The translator of the work of Drs. Leber and Rottenstein dedicates the result of his labors to the dental profession, but the book is one which can not fail to interest such practitioners of medicine as in any way apply themselves to the study of diseases of the teeth. The object of the author is "to throw some light upon the much-disputed subject—the nature of dental caries." The work concludes with a very few brief therapeutic deductions, the following of which relates to cleaning the teeth:

"Such brushes should be used as are not too hard, and which by a slight pressure can be made to enter the spaces between the teeth. We may advise as useful for this purpose the employment of soap, which by imparting a slightly alkaline quality to the water neutralizes the acids and hinders the development of fungi.

"In many cases the soap does not suffice to remove entirely the deposit formed upon the teeth. In such case there should be added to it powders which act mechanically, but care should be taken that they are not too gritty. The disagreeable taste of soap may be easily corrected.

"We can also recommend the permanganate of potassa dissolved in water as an excellent mouth wash, inasmuch as this remedy is a very excellent antiseptic, and at the same time the best means of preventing fermentation. This water exercises a beneficial action upon the mucous membrane of the mouth."

The Physician's Pocket Case, Record, and Prescription Blank Book. Cincinnati: Robert Clarke & Co.

This is another labor-saving blank book long needed, which as soon as it becomes known will pass into general use.

Clinical Lectures on Diseases of Women. By LOMBE ATHILL, M. D., etc. Second edition, revised and enlarged. Philadelphia: Lindsay & Blackiston.

In a year after the first edition of this work was issued the second made its appearance—a very sure evidence of its high appreciation by the profession. It is not necessary for us to give a detailed notice of this volume, and especially do we refrain from such notice at this late day, for the book has already been published several months. Suffice it to say that after a careful examination of the first edition, and occasional references to the second, we can cordially recommend it to all doctors interested in the study of diseases of women. No physician can procure and read it without being amply repaid for his expenditure of money and time. T. P.

The Preventive Treatment of Calculous Diseases, and the Use of Solvent Remedies. By Sir Henry Thompson, F. R. C. S., etc. Philadelphia: Lindsay & Blakiston. 1873.

Books multiply. The present *brochure* is made up of two lectures by the great lithotritist of University College Hospital, one of which has already appeared in his work on Diseases of the Urinary Organs, the other in the columns of the London Lancet. The latter gives, in Sir Henry's striking style, an account of the various means, orthodox and heterodox, which have been used for the relief of stone without operation. The learned surgeon has succeeded in showing that at the best only very small calculi can be affected by solvents, while the time occupied in the attempt is sometimes at the cost of the period when lithotrity can be performed with the largest degree of safety.

The Physician's Visiting List for 1874. Philadelphia: Lindsay & Blakiston.

This annual visitor is again on our table. It is unrivaled in its way; and, having once experienced its uses and comforts, no physician will do without it.

Clinic of the Month.

TREATMENT OF PROSTATIC RETENTION OF URINE.—Jonathan Hutchinson, F. R. C. S., expresses, in a recent clinical lecture on this subject (London Lancet), a decided preference for flexible rubber catheters without the stylet in prostatic retention, and says "*that in almost all cases of prostatic retention a flexible india-rubber catheter without any stylet can be passed into the bladder.* The india rubber which I use is very soft, and so flexible that you may tie knots in it. Yet the cases are very exceptional in which it can not be got in, and it will in many cases pass readily when the use of a stiff instrument is difficult. The explanation of this is that it can follow the windings of the distorted urethra. In prostatic cases the urethra is not narrowed, but is merely lengthened and pouched and bent by the projecting lobes of the enlarged gland. The india rubber is just stiff enough to permit of its being pushed down the urethra when there is no impediment, and it is flexible enough to allow of its following any windings and mounting over any projections that it may encounter. In using it without a stylet there is of course no scope for either skill or dexterity. All you have to do is to oil it well and then push it in inch by inch. If it stops, withdraw it a little and then try again. In most cases the patient can do it just as well as the surgeon. It causes no pain, and scarcely ever produces bleeding. Its introduction is so simple and easy that it may be repeated two or three times in the day without any risk, and thus you may avoid the necessity of retaining it. I have not the least hesitation in asserting that the time-honored silver catheter ought at once to be superseded by the india-rubber one, and that no one ought ever to think of trying metal, or even gum-elastic, unless he has failed with one of those which I now recommend. It will also in the future, I hope, only be in very exceptional cases that the means which I have recommended in the first part of my lecture will be found necessary. I have myself of late scarcely ever failed to get the india rubber in, and in a few in which I have been unable to do so the conducting silver catheter has served an excellent purpose. Nor is it only in prostatic cases that you will find india rubber catheters useful. They are very valuable for exploration of the urethra in cases of suspected stricture, since they cause the patient less pain than any other kind. They will prove useful also for retention in cases of ruptured urethra, and perhaps in cases of paraplegic incontinence. Now and then, even in cases of stricture, in which the canal is irregular, and the stricture perhaps in part due to spasm, you will find unexpectedly that a small-sized india-rubber instrument can be got in. I have succeeded with them in one or two cases of this kind greatly to my astonishment, even after some difficulty had been encountered with metal."

DRESSING WITH MAGNESIA.—Dr. Ohleyer advocates the use of magnesia, which he has found very successful, in the dressing of certain ulcers when fermentative processes retarded healing. Magnesia neutralizes the acids present, prevents the access of oxygen to the surface, and protects the granulations. The author especially applies it to (1) atonic ulcers; (2) cases in which the skin is without epidermis, and in which there is danger of suppuration; (3) inflamed and painful sores; (4) wounds which require to be stimulated or to be withdrawn from the influence of air, or in which suppuration should be diminished or modified. Dr. Ohleyer has also used magnesia with good results in erysipelas of the face as an isolating substance. *(Ibid.)*

The "Second Dressing" after Operations for Cataract.—M. de Wecker (London Lancet) recommends that if at the second dressing, which usually is done some twenty-four hours after the operation, an increased conjunctival secretion is noticed, the segment of the cornea which contains the wound is of a grayish tint, the aqueous is not perfectly clear, or the conjunctival wound presents the slightest tumefaction, then a solution of hydrochlorate of quinine (forty centigrammes to sixty grammes of distilled water) should be prescribed. With this preparation, dropped from above, the wound is to be carefully cleansed every hour. The dressing concluded, a drop of the solution of atropine must be placed between the lids, upon which a compress saturated with the solution of quinine is to be constantly applied. This treatment must be interrupted only at night for some six hours. This application, which was recommended by Prof. Nagel for the inflammatory complications which attend certain operations, is said by Wecker often to save an eye threatened with panophthalmitis; and if it fail to accomplish this, it has the great advantage that the destruction of the eye is not accompanied by agonizing suffering and by almost complete atrophy of the organ.

Convalescence in Typhoid Fever.—"When is a patient convalescent from typhoid fever?" is a question thus answered by that excellent observer, Dr. P. W. Latham *(ibid.)*: "The only satisfactory answer, in my opinion, is after the morning and evening temperatures, and especially the latter, on *at least* two successive days have remained about the normal point, or between 98° and 99° F. In Dr. Brittan's case the temperatures varied from 98° to 100°, not being higher than 100.6°. The daily variations are not given, but it would be instructive to know whether before the collapse on the twenty-third the patient's temperature on at least two successive days at 8 A. M. and 6 P. M. had remained between 98° and 99°. Two years ago I referred to cases where, after all the general symptoms of typhoid fever had passed away, considerable hemorrhage took place from the bowels; and I also stated that during the period of defervescence 'the patient's tongue may be clean and moist, the appetite ravenous, the patient crying out for food, and the typhoid ulcers still unhealed. The thermometer alone will tell us this. It will probably show at this stage an evening temperature of about 101° F., with a morning temperature of 1.6° to 2° lower, and a mutton-chop might now be sufficient to induce fresh irritation of the intestinal ulcers, fatal hemorrhage, or perforation. *It is only after the evening temperature has remained on at least two successive days below 99° F. that we can be sure the ulcers have healed*, and that solid food may be given without risk.'

"During the last three years I have seen no instance of a relapse after this condition has been reached. I have seen some relapses where the precaution with regard to food was not observed. I have seen other cases where, in spite of solid food being given before a normal evening temperature was reached, the patient recovered; but that is no argument against the truth of the rule. And if taking solid food before the intestinal ulcers are healed may possibly, though not invariably, give rise to increased fever, fresh ulceration, or even perforation, it is surely not justifiable to allow the patient to take it until all uncertainty with regard to the condition of his intestines is at an end."

FORCED DILATATION IN STRICTURES OF THE ESOPHAGUS.—Dr. Bouchard *(Gaz. des Hôpitaux)* says that we should apply to the esophagus the same methods of dilatation we use for the urethra. He replaces the large sounds of olive shape, with which catheterism of this canal is generally practiced, by cornual sounds, graduated in such a way that between each number there is the difference of one millimetre in circumference. This sound, directed by the fingers and glided without effort into the esophagus until it has passed the cardia, is then kept in its place as long as possible, generally from four to eight minutes. Its presence at first provokes some attempts at vomiting and coughing, with abundant mucosities around the sound. The patient is carefully kept with the head bent forward. Sometimes this becomes insupportable, and we are forced to withdraw the sound, but frequently also the nausea is appeased in a few seconds, only to reappear in a few minutes, in the interval of which the sound may be left in the esophagus. Great prudence is observed in passing from one number to the next, and hardly one millimetre a week is gained—that is, in two visits; in fact, the main point is to proceed slowly. After each sitting the patient experiences in the esophagus a pain which is not acute, and which lasts a variable length of time. This pain and the nausea provoked each time by the presence of the sound are the only inconveniences of the treatment. M. Bouchard has had frequent occasion to make use of this method, and in the narrowest fibrous strictures, and the oldest ones, he has always been able to get the esophagus to a caliber sufficiently wide.

TREATMENT OF SPERMATORRHŒA.—The Lettsomian Lectures for 1873 were delivered by Mr. Henry Lee. The subject, urethral discharges, is one on which there is no higher authority than the distinguished surgeon of Saint George's Hospital. We have room for but a few extracts.

"Now, if the true pathology of by far the greater majority of the cases which have been considered and treated as cases of spermatorrhœa consists, as I believe, simply of a relaxation of the muscular fibers of the ducts entering the prostatic portion of the urethra, then the disease becomes (however it originated) in a great measure a local one, and may be benefited by local treatment. With regard to local applications I would say, however, as a rule, that I believe caustic to be entirely unnecessary. The object in view is to give some degree of tone to the parts; and this is quite as well done by the application of some astringent fluid as by destroying a portion of the mucous membrane. In these cases I have been in the habit of applying a solution of perchloride of iron to the prostatic portion of the urethra through a catheter of peculiar construction. The solution is generally made of the strength of from two to four drachms of the liquor ferri perchloridi to eight ounces of distilled water. A catheter with openings at the end, and a piston in its straight (not curved) part, is charged with some of this fluid, and introduced so that the orifices in the instrument may rest in the prostate gland, and the piston is then thrust forward so as to expel the contents of the catheter. The piston acts much better when placed in the straight part of the catheter, and the inconvenience of the bend is avoided. This mode of treatment is equally applicable to the cases which I have been describing, in which the discharge consists of the secretion of the glands in the neighborhood of the prostate, and to those cases to which there is, though rarely, an involuntary discharge of semen. I have now treated a very considerable number of patients in this way, and often with marked and permanent benefit."

Syphilitic Urethral Discharges communicating Syphilis.—Mr. Lee thinks that the infecting form of syphilis in the present day is much more generally communicated by secondary affections than primary. He concludes that "Hunter was right in saying that a urethral discharge might be so inoculated as to produce constitutional syphilis; that Ricord was right in saying that gonorrhea is a non-syphilitic disease; that Hunter was wrong in supposing that the ordinary secretion of a gonorrhea could be so inoculated as to produce syphilis; that Ricord was wrong in supposing that no urethral discharge that did not proceed from a chancre could be so inoculated; that they were both wrong in supposing that the secretions of secondary syphilitic manifestations, including certain forms of urethral discharge, could not be inoculated so as to produce syphilis upon another person. If these conclusions be correct, it is needless to insist upon their immense importance in a practical, social, and medico-legal point of view. It will very frequently happen that a patient having had constitutional syphilis which has not been completely cured will contract gonorrhea, or a discharge from the urethra will come on without any fresh infection. The patient may be treated for weeks or months with the medicines and injections ordinarily used for gonorrhea, and the discharge will persist. If the real nature of the affection be ascertained, a mild course of mercury will then often cure the patient without further difficulty. In a social point of view it is very sad to think of the amount of misery that has been caused by Ricord's dictum, that a primary chancre alone could produce a chancre. After marriage it has often happened that the husband has found that his wife has become diseased. Conscious, as he supposed, of his own innocence, he has asked his medical attendant if his wife could have had the disease without being exposed to the contact of the secretion of a primary syphilitic sore. The answer has been in the negative, and the husband has most unjustly accused his wife when he alone has been the cause of her affliction."

A Caution concerning Copaiba and Turpentine.—There is a large class of substances which Mr. Lee regards as capable of doing great and permanent injury to the kidneys. He places gin, turpentine, and copaiba foremost among these. He then remarks:

"Apart from any pathological considerations, I would venture to say—and I believe that extended observation will fully confirm the fact—that those who in early life have been subject to irritation of the kidneys are liable to a variety of aches and pains, suffer more from the effects of indigestion, and often are afflicted with serious diseases which they otherwise would have escaped had the kidneys remained in their natural healthy state, so as to have eliminated from the system those injurious or redundant substances to which I have alluded. Nor is functional disease of the kidney alone to be apprehended. We have yet to learn how far organic disease of the kidneys depends upon the prolonged use of irritants referred to. The thickened coats of the capillary tubes, which have lately been so ably described by Dr. Johnson, Sir William Gull, and Dr. Sutton, would have no more probable cause than the circulation through them, if not the stagnation in them, of some of the elements contained in the substances named. Apart, however, from any considerations of the *modus operandi* of drugs or spirits which irritate the kidneys, an extended observation would lead me to the decided conclusion that those who have been subject to such irritation for any length of time die sooner and in more unexpected ways than those who have not. This is a practical point which should never be lost sight of in the treatment of disease, and is particularly applicable to the treatment of urethral discharges. There is no remedy which, given internally, influences some of these discharges, in my opinion, so much as copaiba; but for the reasons I have now given somewhat at length this medicine should not, I think, as a rule, be long continued. I generally give it, in combination with sulphuric acid, in a form recommended by the late Mr. Harrison, of Brook Street. I seldom give more than half a drachm for a dose, and rarely continue it for more than a week at a time. The copaiba, as I have said, is digested before it produces its effect, and the addition of the sulphuric acid may in some way assist this process; however that may be, I have no doubt of the efficacy of this particular combination. Cubebs-pepper does not irritate the kidneys in the same degree as the copaiba. It expends its influence rather upon the mucous membrane of the bowels, and therefore, as pointed out by the late Sir B. Brodie, is an excellent remedy for hemorrhoidal tumors.

Its effects upon urethral discharges are therefore probably in a great measure counter-irritant." (St. George's Hospital Reports.)

THE TREATMENT OF CONGENITAL BRAIN PROTRUSIONS.—Our therapeutic resources in these affections are thus summed up (St. George's Hospital Reports) by Mr. Prescott Hewett in an exhaustive paper on encephalocele and hydrencephalocele:

"Compression is one of the means which we may fairly try, provided we select our cases well. The integuments must be sound, the hernia a small one and reducible; but in this lies the difficulty, for once fairly formed the brain protrusion soon becomes too large to pass back again through the hole in the skull. What is compression likely to do in such a case as this? Nothing but mischief—sqeezing the protruded brain against the hard, unyielding surface of the skull. And then again, if the sac contains any amount of fluid besides the brain-matter, compression, by forcing the fluid into the skull, may lead to serious brain symptoms. Pressure then is to be resorted to with the very greatest care in such cases.

"Should the case appear not suitable for compression, all that can be done is to protect the tumor in the best manner possible, and watch it carefully. If the tumor increases in size, then will come the question as to whether the increase depends upon brain-matter or upon fluid in the sac. Brain-matter can in no wise be dealt with; fluid can be drawn off. This was done, and most successfully, by Mr. R. Adams, whose judicious treatment ought certainly to be followed. The tumor was repeatedly punctured with a fine needle, and without any untoward result. Once only was a lancet used, and it was on this occasion only that there was any thing approaching to feverishness.

"As in chronic hydrocephalus, so here injection of iodine has been tried; but hitherto, as far as I am aware, without success. And indeed injecting iodine could by no possibility be of use, except perchance in those cases in which there is an accumulation of fluid in the sac or in the protruded portion of the ventricle of the brain."

Is Sulphur a Remedy for the Itch? is a question which, accepting both the popular verdict and the dictum of Mr. Erasmus Wilson, we had long since come to regard as settled. It now appears however, that we were mistaken; for, according to Dr. Charles Roberts, one of the staff of St. George's Hospital, pure sulphur is perfectly inert, and its beneficial action due solely to the accidental presence of sulphurous and possibly sulphuric acids in the sulphur employed. Dr. Roberts says sulphur has little right to the position which it holds in the estimation of some surgeons and dermatologists as a therapeutical remedy. Made into an ointment, it is an effectual cure for scabies, but its smell and appearance almost exclude its employment; and as its virtues are due to the sulphurous acid it contains, and the grease of which it is composed, the old sulphur ointment may be cast aside for more elegant and equally effective preparations.

Notes and Queries.

Medical Literature.—The following report on the Medical Literature of the United States was made to the American Medical Association, at its last meeting, by Dr. L. P. Yandell, chairman of the committee:

"The growth of the medical literature of the United States in the twenty-five years since this Association was organized must be gratifying to the pride of every American physician. Going back only a quarter of a century beyond the date referred to, we reach a period in the history of our country when it was nearly destitute of original works on medicine, and we were almost entirely dependent as a profession upon European surgeons and physicians for instruction. At the present time it is not arrogant to say that in this respect we are independent of the world. If an embargo were laid to-day upon all foreign medical works, our own authors would supply all the text-books required by our students, and furnish guides to the practitioner in all the departments of medicine. Nor should we be charged with vain-gloriousness, we believe, if we went further and affirmed that for clearness and fullness of information on all practical points—as exponents of the existing art and science of medicine—they would compare favorably with the best writings of our brethren abroad on the same subjects.

"If then it was practicable when the Association was instituted to report, as the Committee on Medical Literature was required to do, 'on all the periodical medical publications of the country, and the more important articles therein presented to the profession, and on all the original medical publications and medical compilations and compends by American writers;' and, in addition to this, to notice 'all the reprints of foreign medical works,' assuredly it is practicable no longer. The rivulet which constituted our literature at the beginning of the century 'has swollen into a torrent—augmented into a river—expanded into a sea.' A committee might indeed compress it in a report if adequate leisure could be commanded for its preparation; but then the Association would have neither the time nor the patience to listen to such a paper, nor room for it in a single volume of its Transactions.

"Nevertheless, while shrinking from the task originally imposed upon the Committee on Medical Literature, there are functions which it may still perform, we think, with advantage to the profession. It can not be otherwise than profitable to take a survey now and then of the medical productions in which we so abound; to inquire, in an impartial spirit, into their character, their merits, and their deficiencies, their short-comings and their claims to admiration; and especially how our growing literature may be still further elevated and enriched. For, pleasant as it is to dwell upon the progress which it has made in our day, no one will deny that there are faults about it which call loudly for correction.

"During many years past journalism has formed the most striking feature in the medical literature of America. The number of medical journals issued in the United States at this time exceeds forty. It has hardly varied at all in the last twelve months, a few having been discontinued, and a somewhat greater number having come out in their room. Those which have ceased to appear are the journal of the Gynecological Society of Boston and the Psychological Journal of Medicine—two of the ablest on the list. We are glad to announce the revival of the Charleston Journal of Medicine after a suspension of many years. The two new candidates for professional favor are the Sanitarian and the Archives of Scientific and Practical Medicine. The failure of publications possessing the high literary and professional merits of the two journals just mentioned indicates, it would seem, that the profession, much as it is disposed to favor a subdivision of labor in it, is not yet quite ready to sustain works devoted to specialties.

"The fact that we support so large a number of journals devoted to medicine—a number exceeding that of any other country, and equal perhaps to that of France and Great Britain, if not of all Europe united—is certainly significant. These periodicals have subscribers enough to justify their publication and to sustain them all in a state of comparative vigor. This fact implies an equal, nay, a much larger number of readers, and consequently a very wide diffusion of medical facts and news. How widely medical knowledge is in this way diffused it would indeed be impossible to estimate. The discoveries, the new thoughts, the changes in medical doctrine and practice, wherever occurring, are announced in a little while at the door of every physician in our country. And not only so, but many become subscribers and readers of journals, and many are induced to write for them when issued in their neighborhood and conducted by editors known to them, who would never seek these publications if issued at a distance. There can not be a doubt in any mind that the redundancy of this literature acts thus beneficially upon our profession. It is impossible to doubt that as a result of this excess the body of the profession is far better informed and the number of medical writers very much increased.

"But these advantages, it can not be denied, are enjoyed at the expense of some countervailing evils. In truth, it may be affirmed that the superabundance of our journals is the chief cause of the defects of which all complain. The aliment that would render a dozen vigorous divided among four times that number is barely sufficient to keep a majority of them alive. The support every way is manifestly, as to most of them, altogether inadequate. Not only is the subscription insufficient for any thing beyond a feeble maintenance, but the corps of contributors is too small to give the proper variety and interest to their pages. For writers on medicine at this time, however it may have been in a former age, are not able to spin out of their brains matter acceptable to their readers as spiders spin their webs out of their bowels; but they must have experience, observation, ascertained facts, as a basis for their essays if they would make them readable. But in the pressing necessity of his case the medical editor is often compelled to admit crude, vague, rambling articles, which, if his supply of matter were abundant, he would not hesitate a moment about rejecting. No choice is left to him. The inevitable day is coming round when his number must appear; the printer is waiting, and copy must be forthcoming. Such as the editor's drawer affords he is obliged to give out; and like the actor, whose part in the play was to conduct a snow-storm, if his stock of white paper is exhausted in the midst of it, he has nothing left him but to snow such brown paper as may be at hand.

"Nor is this the whole extent of the trouble with our journalism. The editors in too many instances devote only such odds and ends of time to their publications as they can spare from more profitable engagements. Deriving very little pecuniary emolument from their journals, they are in fact compelled to look to other employment for subsistence. Nearly all their time and thoughts are engrossed by what they regard as higher duties. The consequence is plain: their editorial functions are performed in a hurried, slovenly manner. They have not the leisure to 'edit' their works in any true sense of that term. They can not afford time to correct the papers sent them, and prepare them for the public eye. These, it is safe to say, are for the most part hastily written, very often by young, unpracticed writers; and while containing many grains of valuable truth are charged with no small amount of chaff, which demands the winnowing care of the editor; and failing of this they are sent to their account before a critical public 'with all their imperfections on their heads.'

"It must be stated further, in an attempt to go to the bottom of the evils that beset our periodical literature, that the editors themselves are not always careful in the preparation of their articles. In a leading journal, edited by a gentleman deservedly eminent for his professional learning and zeal, we have an illustration of this in almost every article contributed by the editor. On every page of his clinical lectures, which really enrich his journal, he has such prescriptions as these: '℞ Ol. terebinth, Tinct. opium, acacia, aquæ menthæ.' '℞. Carbolic acid, cryst., tinct opii et camph., glycerine, aquæ.' '℞—'Bromine, bromide potass., aquæ dist.;' or as this: '℞ Spts. Nit. dulc., potassa acetas, simple syrup, aquæ;' or this: '℞—Chloroform, acacia, saccharum, aquæ;' in which there is not only a mixture of English and Latin, but Latin half the time given in the wrong case. Nor is this instance by any means a solitary one, but it is enough.

"Editors are not responsible for the facts or the doctrines of their correspondents, but the public unquestionably has a right to expect that the matter of their publications shall be free from glaring literary blunders. It has a right to insist at least that their own papers shall be written carefully and with moderate accuracy. As to the value of the learned languages as a part of the preliminary education of physicians, or the propriety of writing prescriptions in one of them, we have nothing at this time to say; but if the Latin must be employed, it ought certainly to be used correctly, as it was written by the Romans or is set down in our pharmacopœias.

"The department, however, in which our journalism seems to us most deficient is that of Reviews. In only a few American journals of medicine has this department received due attention. In nearly all it has been comparatively neglected. The articles which compose it rarely aspire to the dignity of reviews; but are, as a general rule, mere bibliographical notices, written after a cursory examination of the books under review, and often with slight knowledge of the subject-matter in hand. The notices therefore are too generally made up of commonplace strictures or general praise—mere vague generalities, which leave the reader as much in the dark as ever as to the contents and merits of the author. This grows out of the inability of the conductors of journals to offer pecuniary inducements to contributors. Original articles they are able to command, because the writers hope for fame from their contributions; but such reward can hardly be held out to witers of reviews. Such writing requires, moreover, practice, discrimination, and a mind at once judicious and well informed. The reviewer must be master of his subject, and should be able to compare the work before him with the labors of others in the same field.

"But we will dwell no longer upon the defects of our periodical medical literature. With all its admitted faults, it is of a character still to inspire high, exciting hopes. No one who has watched its progress as we have done for the last thirty years can have a doubt that it is fast outgrowing its imperfections. The journals are not only appearing in a neater mechanical dress and with fewer typographical blemishes, but are altogether more scholarly in style. The papers are more practical, and the selections are more generally made from original sources. If not so able as a few might be made, they are developing our writers, and drawing to them a constantly growing body of contributors. If many of them were started in the interest of medical schools, as probably will not be denied by any one, it must be granted that their conductors have generally been observant enough of propriety to keep that object out of sight. Few of them have betrayed a partisan character. Hardly one of all the forty-odd editors uses his publication to puff the school with which he is connected, or to defame rival institutions. While many articles must find their way into them that are not instructive, very many that are carelessly written and marred by numerous blemishes, it is seldom that we meet with one that offends against decency. Personalities are for the most part eschewed. When an editor shows himself inclined to trespass in that direction, he is soon convinced of the impolicy of his course by the action of his subscribers.

"Much of the improvement which American medical journalism stands in need of must come directly through the editors. They are recognizing more and more clearly their obligation to the profession to look to the literary form and dress as well as to the matter of their publications. As the pecuniary profits of journalism increase, they will be able to devote more time to their editorial duties, and will then see to it that no article not having fair claims to English scholarship shall go forth to the world under the sanction of their names. They will then have the leisure to sift the communications submitted to their judgment, and to prepare their own papers with greater care.

"But there is also much for contributors to do. 'Easy writing,' it has been said, 'makes very hard reading;' and no class of readers has ever felt the truth of the remark more keenly than editors. The weariness of mind, the vexation of spirit with which they have had to address themselves to the irksome toil of getting into shape papers dashed off by their inexperienced authors at a single sitting, is hardly exceeded in all the callings to which men devote themselves. The writers for our journals of medicine should reform this altogether. They should compose their articles with extreme diligence, and resolve never to send one away until they have made it as perfect as they can. 'True ease in writing comes from art, not chance.' Every student of medicine should look forward to becoming a writer, and begin early to cultivate his powers in that way. It will sharpen his observation and give accuracy to his knowledge to write histories of the cases of disease that may be presented to his notice, and to make notes as full as he can of every thing of interest passing before him in his profession. *Nulla dies sine linea* should be his motto. No day should be permitted to elapse without some addition to his note-book. Taking the reports of cases by some good author as his model, and assiduously cultivating the habit of writing out in clear, concise, appropriate language his own daily observations, he will have become a practiced writer by the time he is ready to take his degree. He may be a classical scholar or he may not; his acquaintance with other languages will not make him a writer of his own without practice. And if, though a plain English scholar, he will persist in writing Latin prescriptions, he can not be too strongly urged to compare them with those of our formularies before sending them off to torment the printer. We need hardly add that in their composition he will be expected to limit himself to the use of a single language.

"A branch of the periodical literature of our profession, which is every year growing in importance, is formed by the transactions of our various state medical societies. A volume of this character is issued annually by many associations formed for professional improvement, and each year adds to the number as well as to their interest. The states of New York and Massachusetts and the College of Physicians and Surgeons of Philadelphia have been long sending out these publications, in which have appeared many papers of great value; and for more than forty years Tennessee has been, with occasional interruptions, issuing the transactions of her medical society. Kentucky, South Carolina, Virginia, Ohio, Pennsylvania, Indiana, and Georgia entered upon the work at a later period; and Alabama, North Carolina, Illinois, California, Arkansas, Mississippi, and Texas are now swelling the volume of this useful literature by their contributions. The papers which make up these transactions are not generally characterized by originality; but the industry, the zeal for advancing medicine, and the high tone of professional morality exhibited in them promise the best results to the profession.

"In the last year a large number of volumes, the work of American physicians and surgeons, have been issued. At the head of the list, in respect of size and probably also for intrinsic interest to the profession every where, stands the Medical and Surgical History of the War of the Rebellion. These splendid quarto volumes embody the facts and deductions of a vast number of independent observers, and give a most interesting medical history of the war. The only regret felt in looking through the magazine of statistics of which they are made up is that the history to which they relate can never be rendered complete by similar volumes giving the medical statistics of the opposing army. But we are justified in saying that these volumes make a valuable addition to our medical literature, and are creditable to our country as well as to their painstaking authors; showing throughout a high degree of cultivation, and breathing a spirit of humanity which acknowledges no party or political creed.

"The fifth edition of Dr. Gross's great work on Surgery has been published within the last twelve months, and a third edition of Dr. Hammond's elaborate treatise on the Diseases of the Nervous System has also been called for in that time, showing the high appreciation in which these works are held by the profession. In connection with Dr. Gross's admirable System of Surgery, which forms an encyclopedia on that subject, we should be unjust if we failed to mention the Principles and Practice of Surgery by Dr. Hamilton, and the Principles and Practice of Surgery by Dr. Ashhurst, works by which we should be quite willing that the world shall judge of our professional authorship.

"The fourth volume of the Physiology of Man, treating of the Nervous System, by Dr. Austin Flint, jr., fully sustains the high reputation of the preceding volumes, if indeed it is not the ablest of the series. Dr. Byford's Treatise on

Obstetrics, as a clear, practical, comprehensive manual for students and practitioners, is not surpassed by any work on midwifery extant. The work of Dr. Mitchell on Injuries of the Nerves and their consequences is made up of original observations, which render it a most valuable contribution to our medical literature.

"But we must bring this report to a close. We should protract it to an intolerable length if we attempted to notice in detail all the works with which in the last year the profession has been favored by American writers. And, besides, such a labor is quite unnecessary. Through our numerous journals the merits of these works have been made known so widely that we should but repeat what has already been better said of them. Nor, in concluding our report, shall we attempt to point out any 'means for encouraging and maintaining a medical literature of our own,' which, however necessary it may have been when this committee was created, would be now certainly a work of supererogation. It is quite safe to say that our medical literature is now self-sustaining, and, slow as was its growth in its infancy, none could wish it to be more rapid than it is at present. Nay, there are those who are already beginning to cry out for 'a flash of splendid silence.' But the facilities for authorship, as well as the inducements to it, will increase with the growth of our country, and especially of our great cities, which are the natural nurseries of literature and science. The medical centers in our country will multiply; and not only in New York, Philadelphia, and Boston, but in Baltimore, New Orleans, Cincinnati, Chicago, St. Louis, and Louisville, or wherever else great hospitals are established, all the materials for the investigation of disease and for making improvement in its treatment will accumulate, and writers on medicine will spring up. We may rest assured therefore that with us 'of making many books there will be no end,' while medical books are called for by the necessities of men."